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PLANNING OUR NEW SCHOOLS

THE Royal Institute of British Architects was well advised in organising the recent conference on schools with the co-operation of the National Union of Teachers and the Association of Building Technicians, as the papers and discussions brought out numerous aspects of the new educational programme that are of outstanding importance to the distribution, the requirements and the planning of the various types of school now needed and the services these should render to satisfy future demands.

A general outline of these was set forth in the opening address by Sir Robert Wood, of the Ministry of Education, which emphasised the importance of securing architectural advice at the very first stage in formulating schemes for new schools and the remodelling of the present ones to meet the standards laid down in the Regulations. More open space, better lighting, heating and ventilation, in accordance with present-day science are stipulated for, and in addition to this there is the task of making good a deficiency of some 200,000 school places, lost through bomb damage. A reference to the possibilities of prefabrication for schools evoked differences of opinion on this question, and it was evident that further study was needed before a conclusion would be reached on this point.

The subjects discussed were divided under three headings, Nursery and Primary Schools, Secondary Schools, and Buildings of Further Education, but before taking these separately it seems desirable to review the general relationship of educational accommodation to the population served, as opinions on this point appear to be somewhat vague and lacking the information needed to justify decisions. Some useful statistics have been issued by the Association for Planning and Regional Reconstruction which are so helpful as to deserve quotation. For every 1,000 persons there are 13 children of each year of age; this 1,000 would require two nursery classes (2 to 5) one infant class (5 to 7) two junior (7 to 11) and 2½ senior classes (11 to 14). The maximum distance radii are regarded respectively as ⅜ of a mile for the first two, ½ a mile and ¾ of a mile for the latter. These areas, with a normal urban population, would give about 10,000, 20,000 and 40,000 as the population served; thus for town districts the amount and expansion of school accommodation can be approximately estimated, though irregular distributions would have to be allowed for.

In the measurement of schools by classes it must be understood that the "unit" must also include the schedule of ancillary accommodation suited to the grade of school under consideration which, as we shall see, varies according to the age of the children. The question also arises as to the extent to which schools of various grades may be grouped or separated; views differ on this and local conditions may dictate one course in some cases and another in others. From the educational point of view separate schools may be advocated at the earlier stages, while at the more advanced ones larger groups may be preferable. These aspects of the problem as a whole will have to be considered by the architect when advising on sites or on the utilisation and adaptation of existing schools.

We can now proceed to consider the special demands of the various grades of school, starting from the nursery and then proceeding onwards; in each case the provision can be for the number of units the population demands. The nursery unit would consist of one large general activity room, one sleeping room, a room for meals, cooking, washing, lavatory and storage accommodation, and the inclusion of a garden with facilities for keeping pets. If the nursery and infant schools are combined as a nursery school, additional classrooms will be required, and they must be spacious to allow of varied activities, as much of the learning takes the form of doing things so that the equipment must be in scale with the children, light and capable of being moved about by them. A good deal of open-air exercise may well be allowed for; it was suggested that the playground should be regarded as an extension of the classroom; this might be partly covered.

The primary schools, junior and senior, being usually on a larger scale, require careful planning as regards routes and access; to complete the "unit" classrooms must be supplemented by a "quiet" room, one biology and general science room, an art and a music room, a "practical" room (which will be noisy), together with access to a main hall and other normal accessories. In a large school "units" will require to be duplicated or triplicated. Some measure of specialisation seems to be contemplated in senior schools leading up to the more definite variations later.

For the secondary schools the competitive demands of the different types of education required offer the main problem; they can either be dealt with by separate buildings or grouped in one. It is thought that the classification will come under three heads, but the dividing lines are not easily defined, and it is still an open question as to how far such divisions will be within the function of the secondary schools or would be deferred to the range of work in the buildings for further education, such as the young peoples' colleges dealing with those who justify the continuation of their education from the age of 15 onwards. For these it would not be enough to provide adequate classroom, laboratory and workshop accommodation, but the needs of social and recreative interests must also be covered in them. As regards the conception of what such buildings should be the remarks of Mr. Henry Morris, Chief Education Officer for Cambridgeshire, make a strong appeal: "The ordering of the whole of our visual environment is the major premise of architecture, and in architecture thus conceived I include not only the architect, the engineer and craftsman, but also the painter, the sculptor and the landscapist. Ugliness is one of our modern diseases; we live, without complaint in a waste land of un-art. The great professional organisations of teachers have done nothing to educate their members and should begin to make this omission good without delay." He was, however, hardly fair to the architects when he expressed a doubt as to whether they had wakened up to the importance of local government as regards architecture in housing, town-planning and schools.

NOTES AND NEWS

Governmental Changes.

THE changes consequent upon the Government's resignation and the appointment of the "caretaker" Government, which holds office until the General Election on July 5, leave the building and planning world largely untouched. Mr. Duncan Sandys and Mr. W. S. Morrison remain at the Ministries of Works and Town and Country Planning respectively, though each has a new Parliamentary Secretary, in the first case Major R. E. Manningham-Buller, and in the latter Mr. Ronald Tree. Lord Woolton, Lord President of the Council, will have general responsibility in regard to Reconstruction.

District Surveyors' Centenary.

MORE than ordinary interest attached to the centenary luncheon of the District Surveyors' Association, held yesterday, May 31, at Vintners' Hall, Upper Thames-street. So much so that this body, which has only 36 members, was entertaining four Cabinet Ministers of the recent National Government—Mr. H. Morrison, Mr. W. S. Morrison, Mr. Sandys, and Mr. Willink. Its president is Mr. L. A. D. Shiner. London's District Surveyors, in their long history, have never played a more noteworthy part than they played in the just concluded war, a part which for obvious reasons could not be "starred" in the drama. On the outbreak of war all district surveyors were appointed the competent authority under the Defence Regulations to deal with all dangerous buildings; and that, it can be readily understood, entailed a tremendous increase in their work.

A fragment of history is here appropriate. In 1667 an Act to regulate the rebuilding of the City of London after the Great Fire contained provisions for the appointment by the Lord Mayor, Aldermen and Common Council of "one or more discrete and intelligent person or persons in the art of building to be the Surveyors or Supervisors" to see that the requirements were duly observed. Subsequent Acts extended the building regulations beyond the City, first to Westminster and the area within the weekly bills of mortality, and subsequently to various parishes in Middlesex, Surrey, and Kent, until by the Metropolitan Building Act, 1844, the area subject to the requirements comprised that of the present County of London.

District Surveyors and the Raids.

UNTIL about the beginning of the present century most district surveyors were architects in private practice. Now, however, all district surveyors devote their whole time to the office. In 1939, when the Rescue Service was formed, the district surveyors, in addition to their ordinary duties, undertook executive duties in this service, and at the outbreak of war, except in the City of London, and in one Metropolitan borough where special arrangements applied, all Rescue Officers in the county were district surveyors. In October, 1940, the district surveyors were appointed supervisory officers of the War Debris Service, and since that date they have taken an active part in the clearing up of London. The District Surveyors' Association, of which all district surveyors are members, was formed in 1845 "to support and protect the character, status and interest of the profession, office and duties of District Surveyors."

The oath which, under the Building Act of 1774, discreet persons, skilled in the art of building, had to take on their appointment as surveyors or supervisors, was a portentously solemn affair. There is mention of "true and impartial execution of duty," "further and better regulation of buildings and party walls," "the more effectually preventing mischiefs by fire within the Cities of London and Westminster," and "indemnifying under certain conditions, builders and other persons against the penalties to which they are or may be liable for erecting buildings contrary to law," etc.

Chartered Surveyors' President.

THE new President of the Chartered Surveyors' Institution, Mr. Edward Bailey Gillett, who has been elected to succeed Mr. James Barr, was born in 1888. Educated at Marlborough, he was articled in 1906 to Mr. J. H. Oakley (now Sir John Oakley, Past-President), with whose firm, now Messrs. Daniel Smith, Oakley and Garrard, he has remained ever since. In the first Great War, Mr. Gillett served first with the Artists' Rifles, which he joined in August, 1914, and later as an officer in the East Surrey Regiment, with whom he saw service in Belgium, Italy and France. Mr. Gillett qualified as a Professional Associate in 1910 and became a Fellow ten years later. He became a partner in his firm in 1922, and in the following year was elected Chairman of Junior Meetings, as the Junior Organisation was then known. He was Chairman of the London (North-Western) Branch in 1934-1935, and was elected to the Council as a representative of that branch in 1938. He became a Vice-President in 1943 and Senior Vice-President in 1944. He has served on various Standing and Special Committees and has been Chairman of the Professional Practice Committee and the Special (Review of Internal Affairs) Committee. Among other appointments he is Surveyor to the Fishmongers' Company.

Housing Standards.

MR. GEORGE HICKS, late Parliamentary Secretary of the Ministry of Works, addressing the West Willesden Labour Party Housing Conference on May 12, said that he did not suppose anybody was very much in love with temporary houses. They were not very exciting to look at, but they were only a stop-gap; they had never been thought of as anything else.

"There is one development of a non-technical nature," he added, "which I particularly welcome. There is a long-standing need for some system whereby the ordinary layman, when he buys a house, can get with it some kind of certificate or guarantee which would assure him that he was getting a sound article. A scheme such as this has been worked out by the National House Builders' Registration Council, and will, I hope, soon be in operation. Both the industry and the public at large should welcome this development, since the jerry-builder is an enemy of both of them."

Lancashire County Architect.

A SHORT list of three was chosen on May 23 for the position of Lancashire County Architect. The candidates are Mr. George N. Hill, Manchester City Architect; Mr. John N. Meredith, Bristol City Architect; and Mr. Hubert Bennett, Southampton Borough Architect. The salary of the post is £2,000, rising to £2,500. The Co-ordination Committee will meet on June 8 to make a final recommendation to the County Council.

Rebuilding at Westminster School.

PLANS are on foot for the rebuilding or reconstruction of the buildings of Westminster School damaged in the raids. These include the great School Hall and College Dormitory, while a new building, a special "Play Chamber" for the Latin Play, is to be erected on a site adjoining the Dormitory. Mr. Hubert Worthington, A.R.A., has been appointed architect.

Standard Method of Measurement.

THE Standing Joint Committee for the Standard Method of Measurement of Building Works reminds those interested that the closing date for receiving recommendations for the proposed revision was May 31, as stated in the original announcement in *The Builder*. Any professional or trade association which contemplates offering suggestions or making recommendations and has not yet done so should communicate with the Hon. Sec., Mr. P. T. Walters, F.S.I., Sicilian House, Sicilian-avenue, London, W.C.1.

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COMING EVENTS

Tuesday, June 5.

L.M.B.A. (No. 5 Area). Luncheon meeting. Mr. G. W. Buchanan, P.L.M.B.A., Guest of Honour. Zeta Restaurant, Putney, S.W. 12.45 p.m.

HOUSING CENTRE. Mr. Gordon Russell on "Propaganda for Good Housing Design." 13, Suffolk-street, S.W.1. 1.15 p.m. (buffet lunch, 12.45 p.m.).

Wednesday, June 6.

ROYAL SOCIETY OF ARTS. Messrs. Christian Barman and T. E. Thomas on "Design in Modern Transport." John Adam-street, W.C.2. 1.45 p.m. (buffet lunch, 12.45 p.m.).

Thursday, June 7.

UNIVERSITY OF LONDON. Mr. R. M. Wynne-Edwards delivers 2nd Extension Lecture on "Plant in the Building Industry." London School of Hygiene, Kepple-street, W.C.1. 5.30 p.m.

Saturday, June 9.

ECCLESIOLOGICAL SOCIETY. Annual Service. St. Bartholomew the Great, West Smithfield. 3 p.m.

ROYAL SANITARY INSTITUTE. Mr. R. L. Stirling on "Influence of Housing Needs on the Planning Scheme." Mr. D. Whiteley on "The Water Undertaking and its Contribution to the Nation's Health." Usher Art Gallery, Lincoln. 10.15 a.m.

ROYAL BOROUGH OF KINGSTON-ON-THAMES. Mr. George Pepler to open Town Planning and Housing Exhibition. Library Lecture Hall, Kingston-on-Thames. 3 p.m.

From *The Builder* of 1845.

Saturday, May 31, 1845.

ABSURDITY.—A country correspondent tells us that a gentleman in the neighbourhood of Dudley has recently offered to give the sum of 5,000*l.* for the purpose of erecting a new church, provided that penny postage stamps to the amount of 2,000*l.*, which have been obliterated by passing through the post office, are sent to him within a limited period. We said "How great!" on commencing the paragraph, but ended it with "How small!"

***It is difficult to know what was in the mind of the gentleman from Dudley, but he may have been more astute than the Editor gave him credit for. According to Messrs. Gibbons, philatelists, the "penny red" current in 1845 is now worth nine times its face value, and what seemed an absurdity may in fact have been a long-term investment!

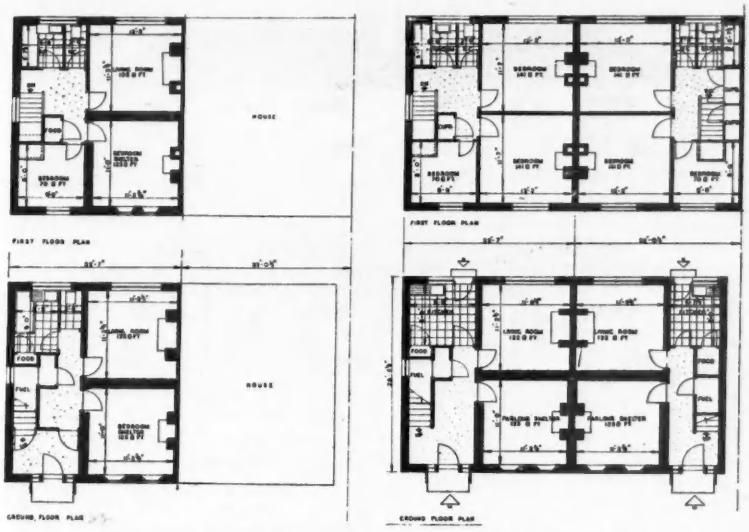


FIG. 1.—"DUPLEX" HOUSE FOR M.O.S. G. A. JELLICOE, F.R.I.B.A., ARCHITECT.

WANTED—"A DUPLEX"

By EDRIC NEEL, M.A., A.R.I.B.A.

In view of the shortage of labour and materials in the immediate post-war years, housing accommodation will have to be rationed. This rationing could take the form of reducing standards of space, and/or structure, and/or equipment.

The temporary housing programme is based upon a reduced standard of space and structure. Equipment, however, is more complete than in the pre-war house. It should also be noted that it has not yet been established whether the structure of the temporary houses is less permanent than traditional construction. The standard of area is ample for a four-person family, and even for a six-person family the temporary house would not contravene the Overcrowding Act (now temporarily in abeyance).

A second proposal for rationing housing space was the half-house scheme, put forward by Liverpool. Here the idea was to build the ground floor of a permanent house and later add a second storey. This proposal had the disadvantage that roof waterproofing of a single-storey structure would have to be removed and reinstated when the second storey was built—an expensive operation. A further disadvantage was that the addition of a second storey called for major building operations entailing the return of all the available tradesmen and plant—again an uneconomical proposition and one likely to be viewed with a jaundiced eye by the tenant who had got his garden under way.

A third proposal for space rationing is what has now come to be known as the Duplex house. A Duplex house is perhaps best defined as one designed to accommodate two families under admittedly sub-standard conditions which can, at a later date and without serious structural alterations, be occupied by a single family.

The Duplex proposition has, so far, been based on temporary two-family occupation with ultimate reversion to one-family occupation. However, in view of the fact that a large proportion of small families will make up the 1950 population (viz., A.P.R.R. Broadsheet No. 3—"Housing the 1950 Population"), this one-angle approach might be reconsidered, since the demand for single- or two-bedroom flats will be great.

A number of houses built by the Ministry of Supply to house war workers incorporated the Duplex principle. Ground and first-floor plans of some houses, designed by G. A. Jellicoe, F.R.I.B.A., are shown in Fig. 1. It will be noted that ground-floor plan caters for only one bedroom, whereas the first-floor plan provides two bedrooms. Ultimately, this type of house would convert to a three-bedroom parlour type.

The next development in Duplex planning was the Cement and Concrete Association's publication, "Family Housing in War Time." Various Duplex plans were illustrated therein, ranging from a three-bedroom non-parlour type of 846 sq. ft. to a four-bedroom parlour type of 1,173 sq. ft. The plans of the latter are shown in Fig. 2.

The Duplex next came to life in Scotland under the ministrations of Mr. Sam Bunton, L.R.I.B.A., and secured sufficient official support to be included in the Scottish Housing Advisory Committee's Report—"Planning Our New Homes" (Fig. 3).

Returning to England, the Duplex house, supported by the Temporary Construction Sub-Committee of the Central Housing Advisory Committee to the Ministry of Health (Chairman, Mr. Lewis Silkin) was built among the Ministry of Works demonstration houses at Northolt (Fig. 4) and illustrated in the Housing Manual, 1944.

It would now appear, from a circular to Local Authorities, that the Duplex idea is gaining popularity. The problem of planning, which is linked with the design of the structure and of the services to achieve minimum alteration on conversion, is, however, not yet fully resolved. A survey of the problem follows :—

The Problem.

Planning.—The Housing Manual (1944) has laid down the following standards for post-war housing :—

	sq. ft.
2-bedroom (4-person) house	700- 750
3-bedroom (5-person) ,,	800- 900
3-bedroom (6-person) ,,	900-1,000
4-bedroom (7-person) ,,	1,050-1,100

These standards represent desiderata. At the other end of the scale is the Overcrowding Act, where the following mini-

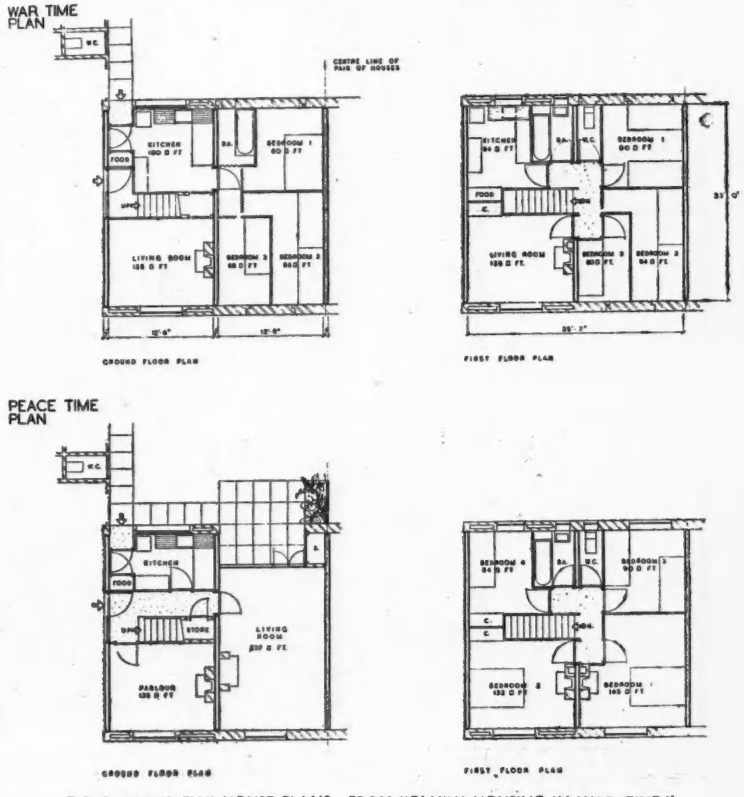


FIG. 2.—"DUPLEX" HOUSE PLANS. FROM "FAMILY HOUSING IN WAR-TIME."

mum standards operate, chiefly as regards sleeping accommodation :—

	sq. ft.
2-person bedroom	110
1½ person bedroom	90
1 person bedroom	50

and it must be remembered that for the purposes of the Act, in computing sleeping accommodation, the living-room may be included. The planning problem is therefore :—

To design a two-storey house which conforms to Housing Manual standards for one-family occupation and which does not contravene the Overcrowding Act for two-family occupation. The house, in the two-family stage, should also :—

(a) Provide separate access to the upper floor;

(b) Provide separate fuel storage for each family and also for the first-floor family pram shelter at ground level.

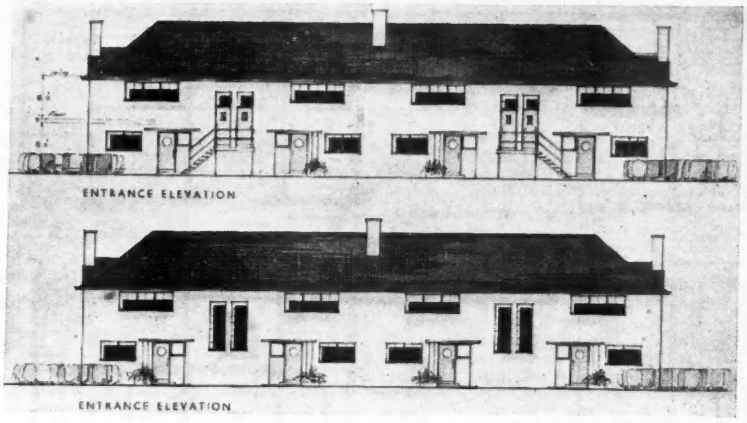
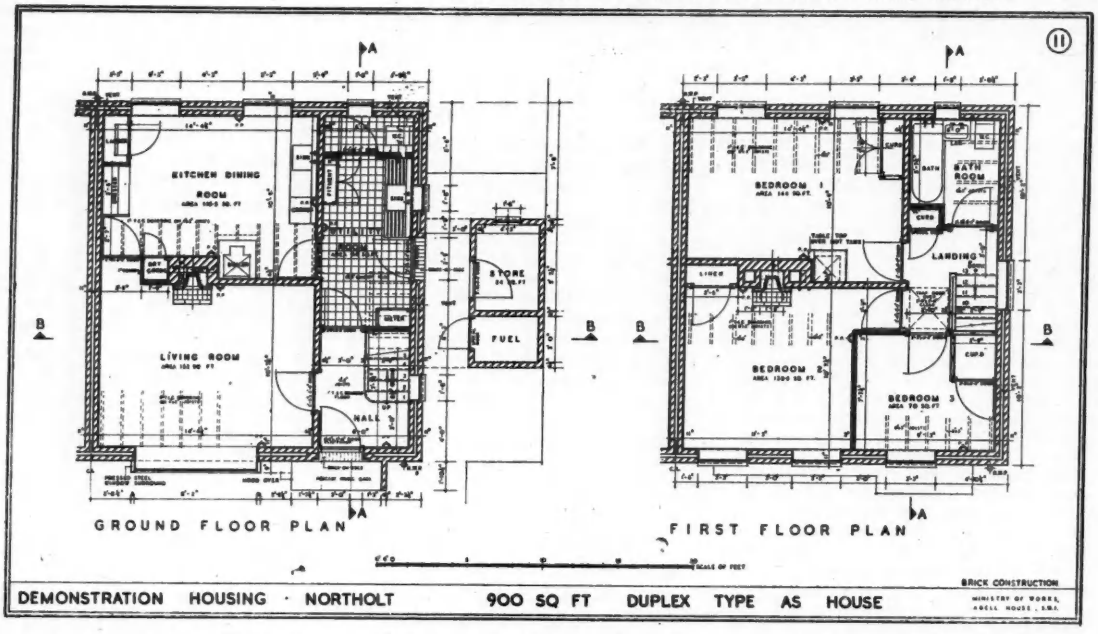


FIG. 3.—THE SCOTTISH "DUPLEX." SAM BUNTON, L.R.I.B.A., ARCHITECT.



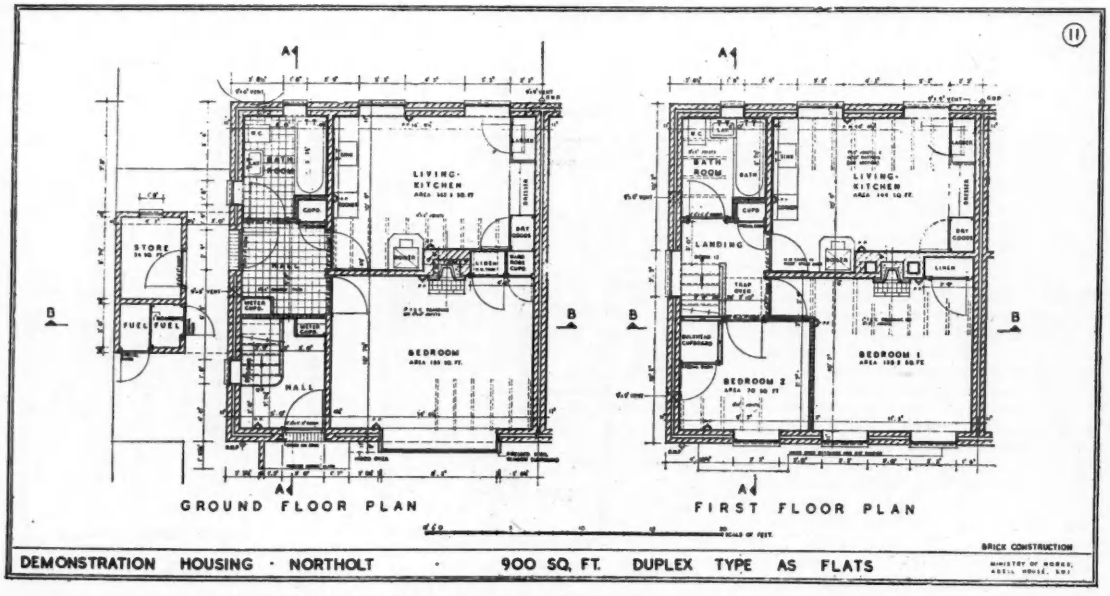


FIG. 4.—PLANS OF THE DEMONSTRATION "DUPLEX" HOUSE AND FLATS AT NORTHOLT.

The problem can be tackled in many ways. For example, a five-person one-family house of 850 sq. ft. could be planned to accommodate a five-person family on each floor without contravening the Overcrowding Act. It must, however, be remembered that the Overcrowding Act is a Penal Act, and it might therefore appear more desirable that the five-person one-family house should be adapted to four- or three-person two-family occupation. In fact, a variety of combinations is possible.

STRUCTURE.—The planning and structural problems are interlocked. It is obviously desirable that conversion from one-family to two-family occupation—or *vice-versa*—should involve as little structural alteration as possible. It may, indeed, be that the conversion from two- to single-family occupation can be planned so that the family do not have to leave the house while the alterations are being made. A decanting problem, as well as much personal inconvenience, would thus be avoided. A study of Figs. 1 to 4 will enable the reader to estimate the magnitude or otherwise of structural alterations required for conversion and thus acquire insight into the structural aspects of the Duplex problem.

SERVICES AND SERVICE ROOMS.—By careful planning, conversion from two- to one-family occupation can be arranged with virtually no structural alterations. The services, however, present an interesting technical problem, since, in a Duplex occupied by two families, each family will require independent appliances for space and water heating and for cooking. Also the following sanitary equipment: bath, lavatory basin, w.c., and kitchen sink.

SPACE HEATING.—Solid fuel is the cheapest. In a two-family Duplex, a grate on either floor is reasonable, on the argument that—on conversion to single-family occupation—one solid fuel grate on the first floor is useful in case of sickness. Gas or electric fires would, of course, give equal service with more convenience, but might increase the fuel budget.

WATER HEATING.—In the two-family Duplex, each family must have an independent hot-water supply, *i.e.*, either a source of heat and hot-water storage capacity, or alternatively an instantaneous water heater.

In the low-cost pre-war house the source of heat was often the living-room grate fitted with a back boiler; a 25- or 30-gallon cylinder being provided for hot-water storage. While there would be no technical difficulty in incorporating such a hot-water system on each floor for two-family occupation, the upper floor water-heating system would clearly be unnecessary for single-family occupation. Moreover, whereas in the two-family stage, hot water to the first-floor bathroom would be supplied by the first-floor source of heating, in the one-family stage supply would be from the ground-floor fire.

In summarising, it may be said that the use of solid fuel for water heating in Duplex houses needs careful costing both as regards capital, running and residual costs. At first sight, solid fuel water heating would appear unsuitable. A possible compromise in a two-family Duplex would be that the ground-floor flat should have solid fuel water heating, and that the first floor flat should have instantaneous or storage water heating. This compromise would appear possible provided that allocation conformed with tenants' preference.

Gas or electric instantaneous or storage water heaters for each floor of the two-family Duplex would obviously be satisfactory as regards performance, and would involve little capital cost. Running charges might, however, be a strain on the budget of the lower-income groups.

COOKING.—Here again a solid fuel combination grate is the cheapest, but the difficulties already mentioned as regards the use of one appliance for space and water heating would again arise. In other words, the use of a combination appliance would probably be limited to the ground-floor flat of the two-family Duplex. It should, however, be borne in mind that in South England, independent gas or electric cookers are preferred to solid fuel for cooking.

Space, Water Heating and Cooking—Summary.

If, for the two-family Duplex, we assume space heating to be by solid fuel and water heating and cooking by independent gas or electrical appliances, then conversion to single-family occupation will involve :—

(1) The removal from the first-floor flat of—
  (a) A Cooker;
  (b) A Sink (unless on one-family occupation the room where the sink was placed becomes a bedroom, in which case the sink might be left for personal washing).
(2) The removal from the ground-floor flat of—
  (a) A Bath;
  (b) W.c. or lavatory basin (unless these fittings are in a room which on one-family occupation becomes a ground-floor cloakroom).

This represents minimum conversion. Other methods of space, water heating and cooking would involve larger conversion work. On the other hand, other combinations might give lower overall running costs, and this factor must be balanced against conversion costs.

ELECTRICAL INSTALLATION.—In the two-family Duplex, separate circuits, as well as separate fuse and distribution boards and meters, will be required on each floor. Such an installation will be more expensive than the installation for one-family occupation, but since the total cost of an electric installation is only a small proportion of the total house cost, the matter is not a serious one.

The planner should make provision on each floor for a compartment for the housing of control gear. Both ground and first-floor compartments will contain meter, consumers' cut-out and fuse and distribution board, but the ground-floor compartment will, in addition, house company's cable gland and main switch.

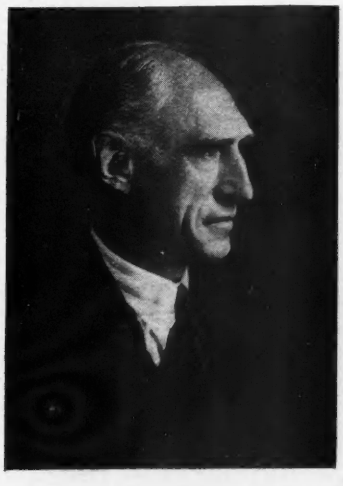
GAS INSTALLATION.—Here again, ground and first floors should be completely independent and the layout of supply pipework planned accordingly. The gas meter is probably housed most conveniently in the same compartment as the electrical control gear.

ELECTRIC AND GAS INSTALLATION—CONVERSION TO ONE-FAMILY OCCUPATION.—Minimum conversion would consist of the removal of the first-floor gas and electric meters. The pipework and wiring which previously passed through the meters would be connected direct, and appropriate connections should be provided in the first instance to ensure easy conversion.

Conclusion.

The brief outline of Duplex development given above, considered in relation to the planning and other technical requirements, shows that finality has not yet been reached. The problem is a difficult one in that the compromises necessary are more numerous than those involved in normal small-house design.

Publication of the plan of the Ministry of Works' temporary house produced a spate of suggested improvements from all over the country. A similar effort is called for on the Duplex problem.



MR. GRAHAM DAWBARN, M.A., F.R.I.B.A., the New President of the Architectural Association.

THE A.A.

New President, Officers and Council.

MR. GRAHAM RICHARDS DAWBARN, M.A. Cantab., F.R.I.B.A., F.R.Ae.S., M.I.Struct.E., has been elected President of the Architectural Association for session ending May 31, 1946.

The new President, who is a partner in Norman and Dawbarn, architects and consulting engineers, is 51 years old. Educated at Kings School, Canterbury, and Corpus Christi College, Cambridge, he studied architecture under Professors Prior Ernest Newton and Arthur Keen, after which he served as Assistant Engineer, P.W.D., Hongkong, from 1921-23. He served in France with the Royal Fusiliers, 1915-16, being invalided in January, 1918.

In 1927 he was awarded the Henry Saxon Snell Prize and reported on Hospital Construction in Europe. In 1931 he won the Godwin and Wimperis Bequest, and navigated 7,000 miles in the U.S.A. in a Puss Moth piloted by his late partner, Sir Nigel Norman, and reported on American aerodromes. His executed works include Constantine Technical College, Middlesbrough; Raffles College, Singapore (with Cyril Farey); additions to Corpus Christi College, Cambridge; various civil aerodrome buildings; the permanent A.A.F. Station at Ringway; and reconstructions for the Tavistock Clinic, *The Lancet*. Hodder and Stoughton, and Dame Ethel Locke King.

Other officers and Council are:—VICE-PRESIDENTS: John Grey, F.R.I.B.A., A.A. Dipl., and Ralph Tubbs, A.R.I.B.A., A.A. Dipl. HON. SECRETARY: Henry Braddock, A.R.I.B.A., A.A. Dipl. HON. TREASURER: Eric L. Bird, A.R.I.B.A. HON. EDITOR: J. N. Summerson, A.R.I.B.A. HON. LIBRARIAN: Alfred S. Knott, A.R.I.B.A. PAST PRESIDENT: A. F. B. Anderson, F.R.I.B.A., S.A.D.G.

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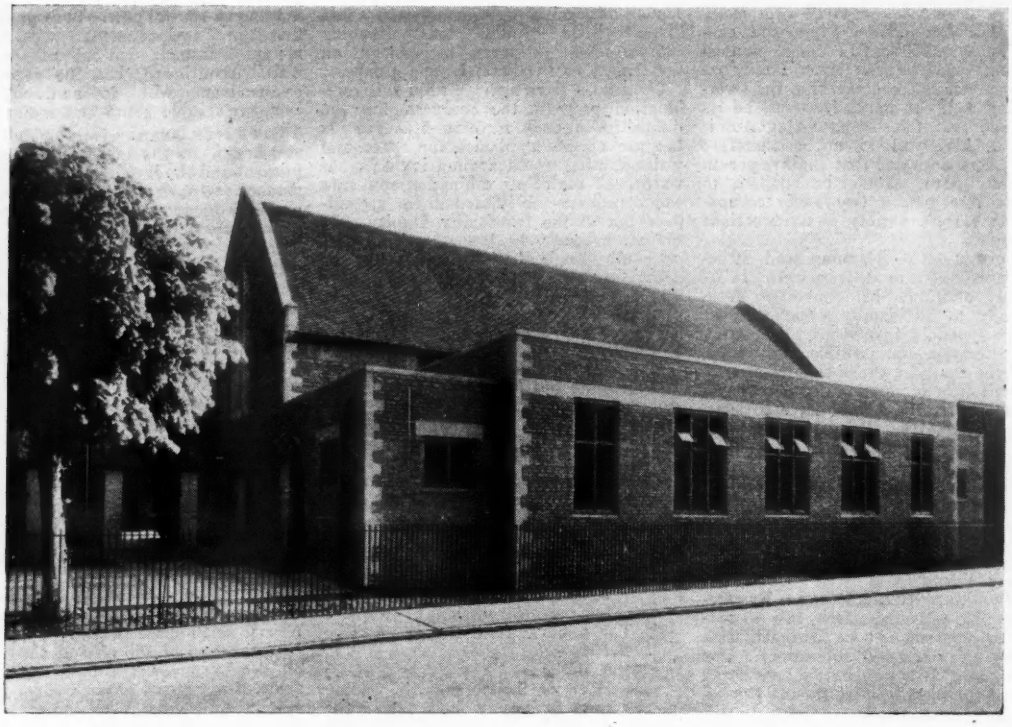
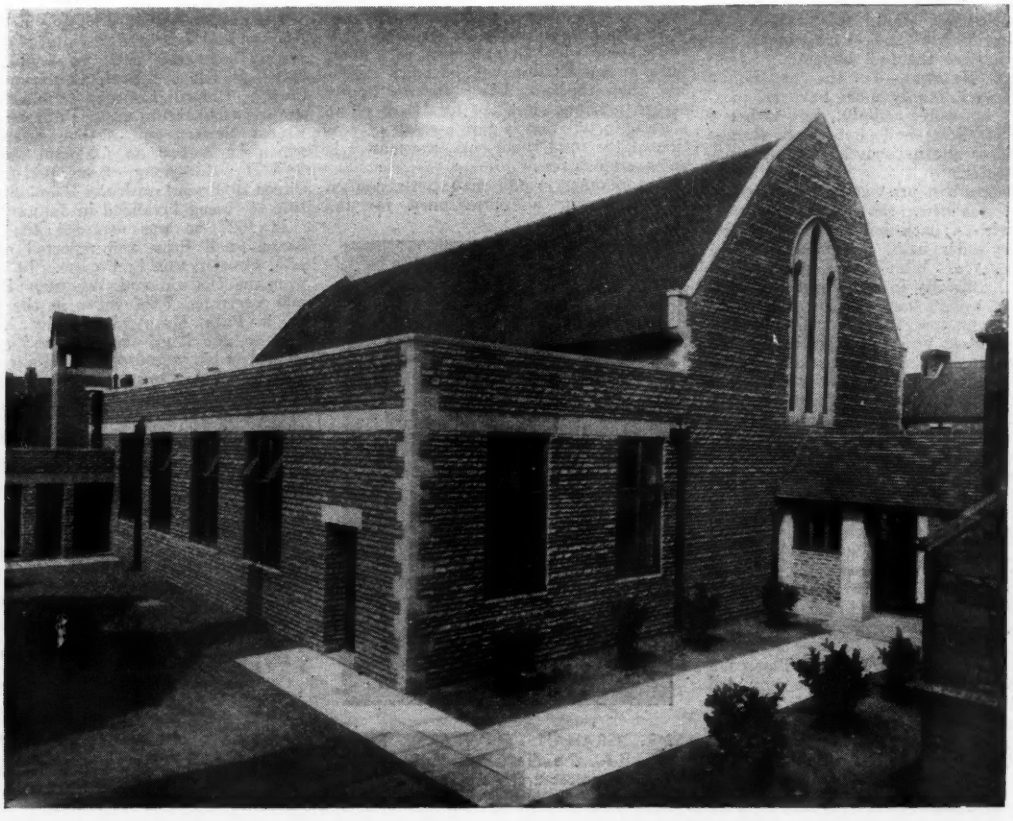


VIEW FROM ROAD. *Below:* VIEW FROM SOUTH-EAST.

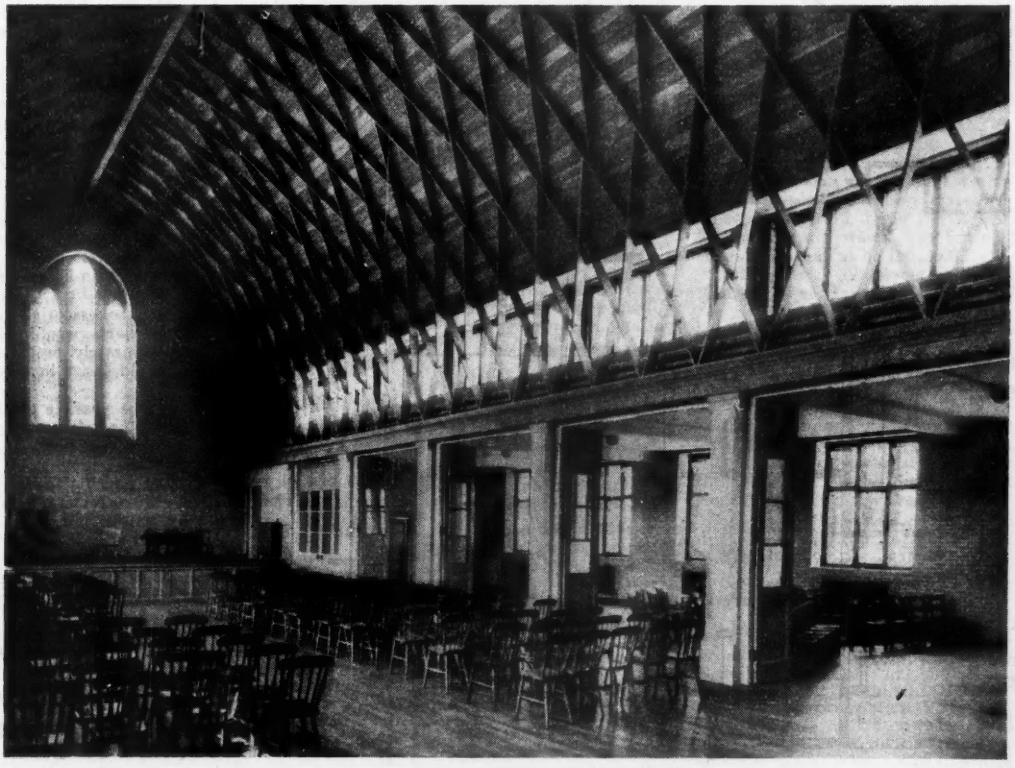
ST. MARY'S CHURCH HALL, FARCOTTON

LESLIE T. MOORE, M.C., F.R.I.B.A., ARCHITECT



R.A. Exhibition, 1945.

Above and Below: TWO VIEWS OF INTERIOR OF HALL.



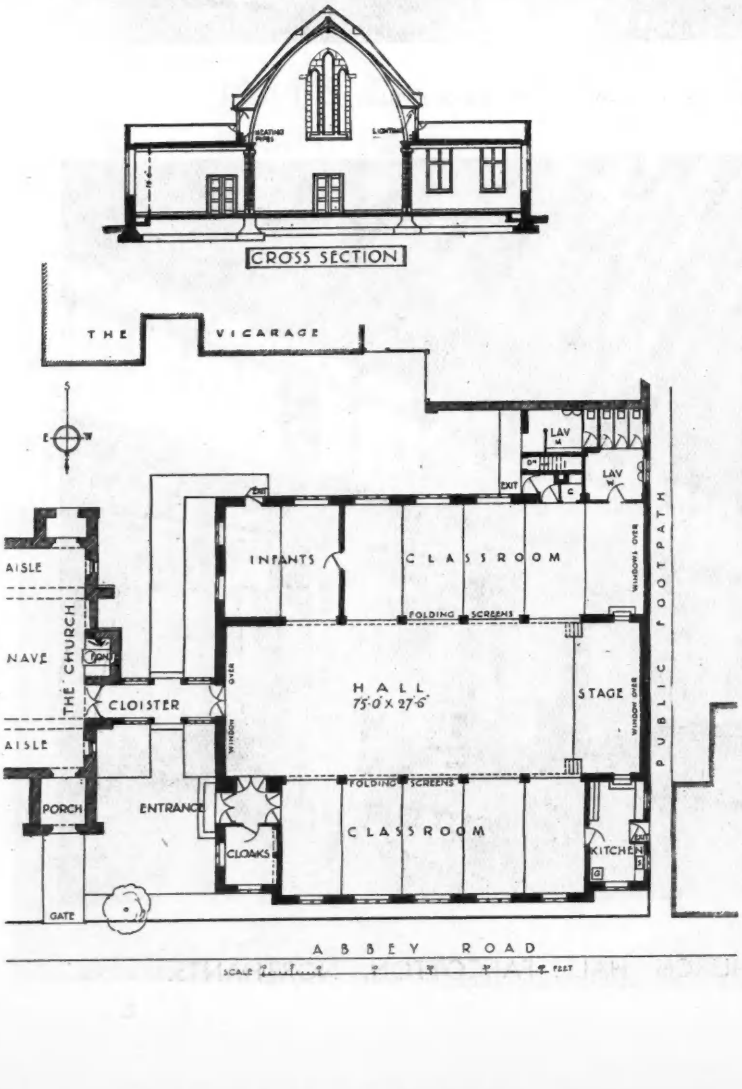
ST. MARY'S CHURCH HALL, FARCOTTON, NORTHANTS.

ST. MARY'S CHURCH HALL, FARCOTTON

THIS HALL, COMPLETED DURING THE WAR, is built to the west of the Parish Church, for Sunday-school and parochial purposes. Architecturally, its chief interest centres on the roofing and the fact that the concrete flat roofs over the classrooms or aisles absorb the thrust created by the Lamella trussless roof to the central hall, the span of which is 27 ft. 6 in.

St. Mary's Church was built of stone about 60 years ago and is in the Early English style, with fine arcades, and stone vaulted throughout. The external walling of the new building, executed in rock-faced Buxton stone, follows the older work, Weldon stone being used for the dressings. Internally, Grovebury sandstone bricks have been adopted with light mortar, and the grey tone gives a pleasing effect The Gothic-shaped Lamella roof is built up of wrot Columbian pine. The clerestory, arranged above the plate level, is veiled by the interlacing diamond pattern of the roof structure. This form of roof permits of Badminton being played, which was one of the requirements. Acoustically the hall is successful. Heating pipes are carried the length of the hall at the clerestory level, the feed tank to the system being planned at the top of the boiler flue chimney, there being no roof space. The electric lighting to the hall is also arranged at clerestory level.

The floor, the external doors and window frames are of oak. The main roof is covered with hand-made sand-faced tiling. The cost of the building, carried out by Messrs. A. Glenn and Sons, Ltd., of Northampton, was £6,850. The Lamella roof was executed by the Merchant Trading Co., the roof tiling by Robert Y. Ames, and the heating by S. Booth, Horrocks, Ltd., of Northampton. Other sub-contractors were steel casements and glazing by C. E. Welstead, Ltd., electric lighting by Hutchings and Cunningham, Ltd., sanitary fittings Dent and Hellyer, Ltd., and ironmongery, Nettlefold and Sons, Ltd.



Regional Housing Depots.

The immense output involved by the Government's Temporary Housing programme could not be coped with by any one factory, nor, for that matter, by a group of factories. As an example, the Uni-Seco organisation relies on the output of some 80 firms, and to attempt to feed sites where buildings are to be erected direct from all the factories would present an almost insuperable problem. Experience has proved the necessity of establishing Regional Distributing Centres, or marshalling yards, into which the various parts are brought, and from which they are issued in the appropriate quantities as complete sets of buildings. The Regional Depots which have been, or are in the process of being, established are located in geographical relationship to the areas in which the buildings will be required.

CORRESPONDENCE

Production After the War.

TO THE EDITOR OF *The Builder*.

SIR,—I am most interested in the point raised in your Leader of April 13, in reference to the paper by Mr. T. P. Bennett before the Builders' Association, *i.e.*, the need for a new incentive to work when the old incentive, the fear of unemployment, no longer operates.

I agree with Mr. Bennett that the apprenticeship system must be developed and encouraged, and steps are being taken to that end, also that the organisation and management of builders' contracts must be improved, and that every opportunity should be afforded for a man to pass from the lowest to the highest position in the industry.

All these are matters to which both sides of the building industry should address themselves without delay, but they do not solve the problem of the need for an incentive to work harder.

I think the suggestion contained in the last paragraph of your Leader is well worth serious thought and investigation. I do not think, however, that a system of profit-sharing by the whole industry would meet the case. It would be too impersonal and in effect would merely mean a slight increase on all wages, and there would be little direct relationship between the good work done on a job and the reward. In fact, the slacker would benefit equally with the conscientious worker.

I admit the difficulties and disadvantages of piecework, but I am not at all satisfied that a profit-sharing system applied to individual firms or jobs is not practicable. In war industries the most successful system of bonus pay was the "Team System." Why not apply the "Team System" to building? If our contracts are properly organised as Mr. Bennett advocates, and time and progress programmes prepared, there could be a bonus payment to each trade in respect of the number of man-hours below the scheduled number. This could apply to all trades, and would have the advantage that (1) payments could be made as each trade finishes its task and before the men are dispersed to other jobs, (2) the "Team Spirit" would be encouraged, the slacker could be left to his mates to be dealt with, and (3) the contractor will profit by the reduced overheads as well as his direct share in the reduced man-hours to complete the job.

It would be, of course, essential that the time and progress charts would have to be carefully and accurately prepared and that all parties should assist in their preparation.

It would perhaps be possible to arrange for the quantities to be taken off to coincide with the time and progress chart up to ground floor, first floor, etc., with bonus payment payable at each stage.

There are, of course, difficulties in such a scheme—there will be in any; but I do not think it is beyond the ability of the industry to devise a scheme which would have the merit of being in keeping with the spirit of the age and would make all parties real partners in the industry; both employers and employees would profit in direct relationship to their organising ability and industry respectively.

Cardiff. PERCY THOMAS.

Production and Living Standards.

TO THE EDITOR OF *The Builder*.

SIR,—It is not generally realised, apparently, that the standard of living is raised solely and exclusively by increased production and not by increased wages. We con-

sume products, not wages, and the more production there is the higher our standard of living may be.

The cost of production is to a very large extent affected by the co-operation or otherwise of the ultimate producers—namely, the members of the trade unions. If, for example, the building trade workers could and would double their output at the existing wage rates, the cost of the houses that they want to buy would be reduced proportionately with obvious benefit to themselves financially, to say nothing of the psychological uplift that is the inevitable result of work well done. We are told that the trade unions are willing and anxious to raise the status of their members. Surely the obvious method is to grade their members by trade tests in the manner of the guilds of other times and certify the appropriate wage rate of every member according to his merit and ability?

With the influx of apprentices and fresh adult workers into the industry in the immediate future, an opportunity presents itself to educate them in the plain logic of the relation of production to the standard of living with the hope that they may help to eliminate the old misconceptions and suspicion that are still so potent a hindrance to the workers' financial and social advancement. In this way, too, the prestige of the worker, his union and the industry as a whole would retain the universal respect that the British workman, by his recent behaviour in battle-dress, has so justly won.

W. H. HOSKEN.

Hazelwood Farm, Chipstead.

Post-War Building Problems.

TO THE EDITOR OF *The Builder*.

SIR,—Effective contribution to the solution of post-war building problems can only be secured by clear thinking. It is somewhat illogical to say, as Mr. Hughes says [*The Builder*, May 18] that men who are not building operatives have joined the ranks of builders, for if they have, then they are clearly building operatives.*

When some of us joined the ranks to take part in major battles we were soldiers. "Nemo me impune lacessit." And though few of us are found to-day "in fair round belly with good capon lin'd," every man between youth and old age is properly middle-aged; but whatever arbitrary period we assign, the prime of life is not lightly to be discounted.

The statement that a large percentage of present personnel is composed of unfit men (otherwise they would be in the Services) is neither entirely correct nor is the implication consistent with the remarkable achievements of the industry in the war effort.

It seems that most minds in blinkers are only able to follow when given a directional jerk by the rein of profit.

The "revolutionary" suggestion made by the Director of the London Master Builders seems very akin to the spirit of the "master race." It proposes punishment where betterment or improvement should be preferred. It is rightly suspected of being the thin edge of the Gestapo wedge.

Re-education may well start here before the re-education of other races is contemplated. The rebuilding of more charitable ideas must begin at home before constructive proposals can be made.

London, W.9. M. EDWARDS.

* Mr. Hughes, from his reference in the context to men "who have joined our ranks for various reasons during the present emergency," was clearly thinking of men who have not been trained as building operatives.—ED.

Demobilisation.

TO THE EDITOR OF *The Builder*.

SIR,—As the proprietor of an old-established woodworking and joinery business, I have read with great interest Mr. Hughes's letter and also "In Parliament" in your issue for May 18. I wish to concur first of all with Mr. Hughes's letter, especially his statement that "The spirit of service to the nation and of doing a job for the job's sake will still be there if it can be brought to the surface"; but in this connection I also read Mr. Bevin's reply to Mr. Bellenger in the House that "a man will not go back to the employer" who presumably formerly employed him.

These two points bring to light what I should hope every employer would consider a short-sighted policy, as every employer knows that his former employees, and especially his foremen, are obviously necessary to bring out the qualities and efficiency in a firm so that the best interest of the nation is served in speed and excellence of production.

Employers are not always merely "money grabbers"—most, in fact, really have the interest of the nation at heart; and this being the case, is it not obvious that the employers in the building trade must have back at an early date and irrespective of "age and length of service" their own key men, or in other words, those men who know the firm's way of working, and the best way of using the plant and facilities existing in that firm, and in complete unity with the managing director or directors in their efforts to serve.

The above is a point that seems to have escaped the attention of people interested in getting housing "on its feet." For a firm to be debarred from making application for their former key men is therefore unwise, and also for a firm to be allowed to make application for such men is not necessarily "pulling the strings."

It is sincerely hoped that the Minister of Labour will give this point especial consideration.

THOMAS J. EBDON.

Croydon, Surrey.

Municipal Architects.

TO THE EDITOR OF *The Builder*.

SIR,—In view of the immense building programmes which are, or will be, facing local authorities, and also the difficulty a successful applicant experiences in obtaining living accommodation, I would suggest that it is time that the R.I.B.A. Scale of Salaries for Municipal Architectural Assistants was adopted generally. If this were only put into operation, assistants would, generally speaking, be content to "stay put," and the preparation of post-war schemes would not be hampered by men "coming" and "going" all the time.

A. BERNARD S. FRYER (L.R.I.B.A.).

"What Does the Public Want?"

TO THE EDITOR OF *The Builder*.

SIR,—In a lecture reported in your issue of May 18, Mr. Harold Conolly, A.R.I.B.A., asks, "What does the public want?" I would ask all Council architects to remember, when planning Council flats, that, contrary to the beliefs of many official architects and town planners, the public wants bathrooms, and even wants to be able to *use* them.

My duties during the past few years have brought me in contact with many of the newly erected London County Council blocks of flats, and in many cases I have found that the designers have seen fit to regard the prospective dweller in these flats as some sort of sub-human being, and have arranged the baths to be supplied with a system of hot water as antiquated as it was possible to conceive.

Before the war there was much too much talk of the difficulties of getting the so-called slum dwellers to use their baths, and of their "tendency to use their baths as coal cellars." If they *did* do this, I can see who was to blame. How many people would take their daily bath, and give their children frequent baths, if they, too, had been forced by the architect of their flats to have to boil water in a gas copper and then pump it into the bathroom? These flats were put up in the 1930s, some as late as 1938, and still none of the borough architects or engineers appear to have heard of efficient gas heaters, coke water heaters, or open-fire high-pressure boilers.

When planning for the future, let us see to it that slum dwellers are rehoused in convenient flats. A decent elevation looks nice to the passers-by, but the inhabitant of the flat is more interested in his home comfort, and what is greater comfort than the running hot water in a modern flat?

S. YUDKIN.

75, Chatsworth-road, N.W.2.

The Anglican Use of the Term "Altar."

TO THE EDITOR OF *The Builder*.

SIR,—A quick look through the official form of service for the Coronation of King George VI has revealed that the word "altar" is used more than thirty times.

The Abbey Church of St. Peter, Westminster, is a Royal Peculiar, but is listed among the places of worship of the Anglican Church. Hence it would seem that although the word "altar" may not be a desirable term for an Anglican Holy Table, it is at least permissible.

I. O. JAY
(Vicar of Purston).

Featherstone, Yorks.

TO THE EDITOR OF *The Builder*.

SIR,—The article on this subject recently published is of considerable importance, but neither its author, nor "Churchwarden," quotes the only valid authority for a right apprehension of the principle underlying the rejection of the term "altar."

I refer to Holy Scripture, which never calls the Lord's Table an altar, nor the Lord's Supper a sacrifice or offering. On the contrary, it expressly states that at Calvary the Lord Jesus Christ made one offering for sin which was both all-sufficient and never to be repeated.

Hebrews x. 12 states: "This man (Christ), after He had offered *one sacrifice for sins for ever*, sat down on the right hand of God." This principle is emphasised in the following passages, in which thinking readers will appreciate the significance of the words "once," "once for all," "one offering," Heb. i. 3, vii. 27, ix. 25, 26, 28, and x. 10 and 14.

To speak of the table as an altar, or of the emblems on it as a sacrifice, dishonours the perfection of the finished redemptive work of Christ on the Cross.

DONALD H. T. CONWAY,
Director, Theo. Conway, Ltd.

Weymouth.

Timber Purchases from Sweden.

A trade agreement has recently been signed in Stockholm between the Swedish Wood Exporters' Association and a British delegation of timber experts headed by Sir Archibald Harris, states the Swedish International Press Bureau, according to which Sweden will sell 330,000 standards of wood goods to Britain. Including some quantities reserved for export to Britain earlier during the war a total of some 400,000 standards are lying ready for delivery as soon as shipping can be resumed.

ENGINEERING PRODUCTION

ITS RELATION TO THE BUILDING INDUSTRY.

An address on this subject was given to the Engineering Industries Association on May 16 by Mr. T. P. Bennett, C.B.E., F.R.I.B.A., with the President (Viscount Davidson) in the chair. Mr. Bennett said :—

In considering the possible application of engineering and manufacture to buildings, it is desirable first to have a clear idea of the background of building in England.

Building has been a craft industry very largely relying upon site fabrication for its structure. Its craftsmen have been known as the leading craftsmen in the country, where they have been held in the highest esteem. Their workmanship has given building its outstanding character. This craft character of much of the work has proved to be incapable of reproduction in its entirety in machines. In that respect it does not vary from other machine productions compared with craft production, but we have all accepted the fact that the world can no longer afford to have in all its articles the high and interesting qualities which arise from the work of the highly skilled workman. We may still enjoy hand-made carpets or the beautiful product of the coachmaker, applied to special modern motor cars, the effect of stone carving on our cathedrals, the individualistic work of hand-made wrought-iron, but work of this high grade has now become a luxury. The ordinary article is largely the product of engineering and manufacture. We are concerned, therefore, primarily with the extension of manufacturing possibilities in a great industry which has been slow to absorb the technique of modern factory or machine production. It is an industry where comparison is still made between the work of the craftsmen and the work of the manufacturer.

Some reflection of individual quality is still demanded in building, and the manufactured article must recognise the desire of the public for differences in the appearance of its buildings however much the individual building may be similar in its necessities, its uses, and its general layout. It is probably a fundamental mistake to have developed a unit house instead of a unit of a house.

Requirements and Site Conditions.

The requirements of buildings vary more than the unthinking person realises, and this applies even to such straightforward conditions as the plans of a simple house The habits of people in different parts of the country vary, requirements of families of different sizes vary, and the methods of doing the housework have a reflection in the actual layout of the kitchen equipment and its relationship to the living-room. The site conditions affect the house, houses planned for hilly sites should differ from those planned on flat sites, and aspect, prospect, proximity of main arterial roads, proximity of open spaces, all have a bearing upon requirements, and in the well-laid-out schemes are reflected in the shape and size of the houses which are put on the sites.

Standardised Buildings.

Of all the types of buildings with which the building industry is concerned, houses, factories and schools most readily lend themselves to standardised plans and standardised design. In considering the manufactured portions of these buildings some flexibility is an unquestioned necessity in examining mass production, therefore, we tend towards unit design—units which can be assembled in different ways without affecting the mass manufacture of the units themselves. Suitable design in the form of portions of buildings would enable the skilled designer, the architect who controls the final buildings, to assemble them in different ways to suit the different requirements of individuals and the different site conditions which I have just referred to.

Individual requirements which are undoubtedly needed could thus be obtained by assembling units. It is the experience of the Ministry of Health, when it issues standard plans, that communities assert that their local inhabitants are most comfortable and happy if a particular combination of rooms is provided for them. These may be regarded as minor variations. Nevertheless, the local community considers them essential, and it is the custom in England to endeavour to satisfy the views of the local community. Similarly, factories may well have items in common for specific industries, with regard to the shape, the height and other essential factors, and in the case of schools, which are steadily tending to be standardised, the elementary school, the infants' school, or kindergarten, the secondary school, and technical schools, are all acquiring standard plans for different numbers of children or students, and for different classes of education. These standard plans are more and more being regarded as satisfactory interpretations of the group requirements of particular classes of buildings.

Standard Design.

It is obvious that any standard design which suits the mass production of the engineering industry, or the factory, will only partly satisfy local demands. Its ideal condition would override and ignore these demands altogether. To this extent it will have to break down local views and local prejudices. It will ignore to a large extent local materials, local requirements, and local site conditions, and these will be factors which will slow down the general acceptance of the universal standard design which economically would be most suitable to universal mass production. The manufacturer, or engineering consultant, who is designing portions of standard parts of buildings should never forget this desire for the local variations; it is much more than a whim, it is an essential part of the life of England.

In laying out a scheme of production, therefore, variation of the original standard should always be possible; this can be most readily achieved by manufacturing a component suitable for any building.

The metal window may be regarded as having most completely and most successfully solved many of the problems of mass manufacture applied to building. It has been necessary for this industry first to design an eminently satisfactory window, next to produce it at low cost, third to obtain sufficient variation for application to a large number of different cases, fourth to obtain the interest of the public and of the designers in applying its products to their individual building, and finally to organise supply. The metal window may well be regarded as the foundation of the method of introducing factory production into the industry. Doors have followed windows, and in the great majority of cases they, the ordinary doors of ordinary buildings, are massed-produced articles, the openings being designed to suit the doors, so that a very large part of certain simple buildings are now built around standard doors and standard windows. In America the door has been carried further and has been supplied with its frame, architraves, and standard ironmongery. Each step towards more complete prefabrication needs to carry with it the designer who is prepared to give it individuality by the method of use rather than by the details of design.

It will become obvious that while the building industry is to-day concerned to an extraordinary extent with the design and production of houses, this is not its only function, and it cannot exist very long building houses alone; neither can the community exist without many other classes of buildings. The history of house building shows very obvious rise and fall over the last 50 years, although the general tendency has been to an increased erection of houses. Nevertheless, a mass-produced article which must maintain a high level of output if it is to maintain a low level of cost is much more likely to succeed if its article is able to be used in many types of buildings, and this again should become a cardinal principle of design, and in the choice of the article to be manufactured.

Each new article that is manufactured also needs to carry with it public acceptance, and it may well be that some measure of mass advertising is always a necessity when the article is first placed on the market. It has to convince two quite different classes of people, the designer and the user.

Housing and the Machine.

I referred earlier to the slow movement from the craft building to the machine-made building. There can be no doubt whatever that the extreme urgency of building at the present time has placed a great advantage on the developer of the machine-made article.

This advantage is infinitely less in England than in the rest of Europe or in America because in England the distribution of natural material is very widespread and extremely well developed. The distances between centres of manufacture and centres of use, for most components of building, is relatively short and therefore it compares, from the manufacturers' point of view, badly with other countries. In Russia, Germany, France, Scandinavia, or America, centralised factory production can rightly expect to distribute its products over a very wide area. Once the loading and unloading is faced the distance transported is immaterial, and, therefore, there is less natural tendency in England to factory work than there is elsewhere.

It has been part of the charm of England that its natural resources in building have been widely used, and that we have had bricks in Sussex and Kent, stone in Yorkshire and the Cotswolds, the slate building of Cornwall and parts of Wales, and plastered houses in Cumberland and Suffolk. These natural resources have been established sufficiently long to have craftsmen resident in the area capable of using them and, therefore, there is a very strong reason for continuing with their use because they employ local labour, local products, they suit the country, and they are almost invariably economic in use. It is easy to see that transport and centralisation of manufacture in these cases are operating at a very serious disadvantage.

Advantages of Bricks.

In considering the construction of prefabrication of the walls of houses and other buildings it is desirable to examine the natural advantages of brick, which is our traditional building material. It is easy if viewing any one heading alone to find other materials which will do one job as

well as bricks. It is very much more difficult to find a material which will do all the jobs that bricks will do, and do them all equally successfully :—

(a) We start with the wide distribution of brick earth in England, its nearness to the surface, its easy of quarrying, and the very simple processes of manufacture which are necessary to transform the clay into a good brick.

(b) There are well-established brickworks throughout the country, not always efficient, frequently much too small for present-day requirements, frequently based originally on the distributive area of the horse and cart, and possibly possessing a trade which has not gone beyond this very narrow radius. Nevertheless, within this area they suit the local builder.

(c) Low cost—the ease of manufacture, the local distribution result in the very low cost of bricks. Cutting across this local brick production is the production of the London Brick Company with fletton bricks, where the whole process of manufacture has been marvellously mechanised and brilliantly marketed, and, therefore, is able to compete on extremely favourable cost terms with bricks in most parts of the country. There are different views with regard to its appearance, there are different views with regard to its durability, but, nevertheless, it has become a standard product capable of universal application.

(d) The brick has good appearance, it maintains this feeling of becoming part of the earth, it has still the feeling of craftsmanship, and it has the advantage of great variety.

The cost of maintenance is very low.

(e) Not only is the cost of brickwork low, but neglect of maintenance for any reason leads to no deterioration in the brickwork itself, or at any rate it has no effect for a very great number of years. Brick walls give good insulation to the building; the brick is a material which has a considerable flexibility in building, i.e., it can, without alteration be immediately adapted to different plans, window openings, or doors in different places, and so forth. As a material it can be stored in the open without risk of deterioration, and it is traditionally acceptable both from the point of view of appearance, durability, reliability, and the general knowledge of its behaviour possessed by the community. All of these qualities commend it to the individual both from the point of view of use, and what is of very considerable importance, the confidence it creates from the financial house, such as the building society, who will lend more readily on brick-built houses than any others, with, of course, the exception of stone where the district is suitable.

It is therefore evident that tradition and finance are closely linked. While houses are State aided this is less evident than when an attempt is made to translate the prefabricated house into private ownership. This desire to finance up to the maximum limits only upon traditional houses is very deeply ingrained and has a very definite bearing upon the attempt to establish permanent factory production for the manufacture of prefabricated walls which will be accepted by the public in general.

Defects of Bricks.

It might well be asked, if brick has so many advantages, why there has been any attempt to find an alternative material. The reasons for finding an alternative lie mainly in the conditions of working which exist at the present time and which it is anticipated will exist for some considerable period after the war. The first of these difficulties is the probable shortage of bricklayers. The laying of bricks is a more skilled operation than that of fixing together sheets of material secured by bolts, so that an essential part of the building of houses in brick is the extension of training of bricklayers. For a period there will undoubtedly be a shortage of skilled craftsmen. The second important factor is the need for treating the internal face of the bricks with a smooth surface for purposes of decoration and hygiene. This involves the use of another skilled trade—that of the plasterer—and so far sheets of material, like asbestos or laminated board, have not been able to be fixed rapidly, easily, and effectively on a brick face, so that the use of brickwork involves the use of a second bottle-neck trade—the plasterer craftsman. It is almost certain that there will be difficulty in securing adequate plasterers to plaster the large number of brick houses which would be needed if no alternative material were used. Finally, brick has a local difficulty, that of frosty or inclement weather; it is impossible to lay bricks in frosty weather, and very difficult in periods of heavy rain, so that certain parts of the year involve a restriction on production of brick buildings to a much greater extent than that which exists on buildings manufactured with prefabricated sheets.

Brick can readily carry the load of a two-storey house, and two-storey houses are much more economical in site work than bungalows. One-storey work is, however, easier and faster to construct.

Alternatives for Walls.

These potential bottle-necks have lead the Government to investigate the possible alternative walls for houses. They are comprised in various methods of using materials of which the following is a list :—

(a) Block concrete.
(b) Slab concrete.
(c) Timber.
(d) Plywood.
(e) Flat asbestos sheets with wood-wool insulation.
(f) Corrugated asbestos sheets.
(g) Sheet metal (steel or aluminium)—(i) By motor body technique needing a frame; (ii) by sheet-metal plate.

Some of these materials have been developed for considerable periods :—

(a) and (b)—In the big housing boom after the last war, methods of using concrete blocks and slab concrete were developed to a considerable extent, and although some of them remained in use for a very long time, very few survived until 1939. Broadly speaking, the concrete block proved to have no advantages over brick except in those districts of England where bricks are difficult to obtain. In other places they were less flexible, cost approximately the same amount, has an appearance which was not so good, and, therefore, slowly were superseded by bricks. There have been one or two attempts to develop slab-concrete technique which, by using relatively thin concrete substantially reinforced, enabled the panel of a house to be erected in one operation.

(c) and (d)—Of all the types of temporary or prefabricated houses, the timber house is probably the most satisfactory. It has, of course, a very big fire risk, a substantial maintenance cost, and it tends to harbour vermin. In the countries where it is still used extensively it is very much more economical than any alternative. In England, with its almost complete absence of native timbers, the cost of the timber house is approximately the same as that of the brick house and, therefore, its disadvantages preclude its use on any extensive scale. Plywood is a recent development of timber, and certain types of plywood buildings are very promising, and when used in the form of a stressed skin—*i.e.*, able to carry weight—they would appear to be a sound basis for research and development. A special technique is needed to deal with insulation and the strengthening of the skin.

(e)—Flat asbestos sheets combined with wood-wool is the basis of the "Uni-seco" temporary house, a house which is proving to be very satisfactory temporary structure. The present "Uni-seco" arrangements take practically the whole of the output of flat asbestos, and all the available output of wood-wool.

(f)—Corrugated asbestos sheet is manufactured in various forms and rather adds to the appearance of the house by creating an interesting exterior. The "Arcon" house, which the Ministry of Works are supplying, is a standard temporary house using a type of corrugated asbestos sheet, also utilising the bulk of the present output.

(g)—Sheet-metal was to be the basis of the original "Portal" house, developed on the motor body technique. There have been difficulties during the war in making sufficient steel available for any large steel-house production. Steel houses have not been popular in this country, where they have been tried, mainly because they have a certain weather risk and a certain fire risk, and there are difficulties with condensation. There have been, and still are, attempts to make permanent steel houses successful. The public have not taken to them very satisfactorily, and they do not appear at present a very promising outlet for the use of the steel industry.

A considered view of the alternative materials for walls of buildings, therefore, shows that before one can be successfully introduced, either for houses, schools, factories, or any type of buildings, there is a fairly long path to travel to deal with the problems created by tradition, by costs, by suitability, maintenance and appearance.

Roofs.

In houses the public still demand a pitched roof with either slates or tiles as a covering material. The construction of roofs is a relatively expensive and complicated process. The conditions of the country demand a substantial slope of the roof if one of the normal materials is used. The factory roof is not subject to the same conditions, but big areas which are needed are more easy to obtain if spanned by roof trusses giving a pitched roof than if spanned by girders giving a flat roof, so that for other reasons the tendency is to roof the factory with a pitched roof. In view of the complication in each case, I consider there is room for considerable experiment and invention in means of roofing buildings, preferably with pitched roofs which are made in panels easy to fix, and ready for use. It is also difficult to obtain a roof which equals in appearance that of slates or tiles. The absence of colour is, in many ways, a great drawback. The asbestos industry has made great attempts to get tiles which will be acceptable, but they still present, I think, an unsatisfactory appearance. The concrete industry has been very successful in making an alternative to clay tile, and concrete tiles have been successful to a very large extent and still present a big field for expansion. The flat roof appears to save little cost, and for small building fails to obtain a reasonable appearance. In spite of all these difficulties, the development of the prefabricated roof panel should well repay research.

Costs.

In housing the cost comparison presents quite considerable difficulties. Contrary to expectation, no good alternative material, with proper insulation, proper weather resistance, and good appearance has been able to show a great advantage in cost over permanent construction for walls and roofs. It is true that there is a margin of saving, but if in a house permanently built the cost is taken at £1,000 the utmost that can be saved by temporary materials is £150/£200, and it is possible if increased output can be secured there is just the same margin of saving possible in the permanent house as there is in the temporary house. So long as the margin is as small as this, the advantage of temporary construction is extremely doubtful. There are financial difficulties which have been previously pointed out; there is prejudice; there is the fact that a very large amount of cost is sunk in the house in any case, and, therefore, it is very much better to sink slightly more capital costs and have a permanent dwelling with which everybody is satisfied. All investigations which start on housing or other types of standard buildings to show a good prefabricated alternative will have to be very certain that their costs can compete.

Storage Problems.

Few people realise the very serious storage problems created by prefabricated building, because the main parts of buildings have never been prefabricated in really large numbers. In order to obtain economic output, it is necessary to produce on a large scale. Therefore, three alternatives are possible :—

(1) Extensive stores near the manufacture.

(2) Storage in key transport positions.

(3) The creation of storage space on each building site.

Building sites are subject to layout, town planning and construction difficulties, and in four winter months to weather difficulties. Therefore, it is impossible to guarantee that storage will be available on the site itself. For this reason it is necessary to have some type of storage elsewhere, and before any great commitments with regard to manufacture are made, the cost and the provision of storage must be faced.

Also of moment in considering :—

(a) the cost,

(b) the possibilities of storage

is the fact that site preparation is frequently the bottleneck of housing, and of all other building propositions. The site needs roads, sewers, electric and gas mains, water supply, and contingent upon these items in the bigger type of building operation, sewage disposal and sources of water supply. No building prefabrication problem of real magnitude should lose sight of the fact that site preparation is frequently a governing factor.

Present Limiting Factors.

It is also necessary in this country at a period like the present to realise the key limiting factors of scarce materials and difficult labour. Timber, plywood, steel, asbestos, insulating material and many other components will remain in short supply for considerable periods and need close investigation before commitments are made.

It is obvious from all these discussions that one of the biggest difficulties facing the manufacturer who enters the field of building construction is a guaranteed continuity of markets. He has to pass through a complicated selling organisation in the hands of architects, engineers, the building industry itself, and he has to satisfy the financial conditions created by the lending societies in connection with building operations and, therefore, has not in any sense the complete control of his commodity from start to finish that pertains in most other manufacturing industries. In many cases it is necessary to set up an investigating and inventing organisation, a manufacturing organisation, and then an advertising and selling organisation, apart altogether from the need of creating and manufacturing a good article.

For these reasons the Government have controlled the supply of prefabricated houses because only by this means could real output be ensured on a large scale which could hope to bring the total cost of the house down to the lowest possible limits, and because the financial restrictions on individual purchase are still extensive if not prohibitive.

The Field of Operation.

I have dealt at some length with the background of the building industry from the manufacturers' point of view and with the restrictions which apply to the main structural materials. We can now turn to the fields in which the engineering industry can apply itself to building problems with probable success.

There can be no doubt whatever that plant for building operations is only in its infancy. During the war the heavier type of plant used in aerodrome construction has advanced by leaps and bounds, and all types of earth and concrete work on a big scale can to-day be carried out at probably less cost than pre-war in spite of increased cost of labour and decreased output of individual men. Much of this plant is too big for the average building operation. Therefore, some measure of redesign is needed in these earth work machines, but levellers, trenchers, bulldozers, all types of plant which will deal with earth work and concrete will be universally used. There is urgent need for improved scaffolding, lifting and transporting machinery, means of protecting operations from rain and frost—a vast field for facilitating site work lies open for the inventor and manufacturer. The type of plant required can only be ascertained by close contact with the operation itself and with the builders who will use the machinery.

The building industry has also continued to operate for a very long period with the ordinary craftsmen's tools. Electricity has been slow to apply itself to many things for which it is eminently suitable. Such simple things as mechanical screwdrivers are still rare. Electic hammers and tools of this kind should find almost universal use. Craftsmen, of course, will have to be willing to operate them at their full capacity to get the best use out of them. There are a great many operations in building where electric tools of various kinds would have a very big field of use, would reduce the cost of the individual operation, and, with proper study and co-operation with the men concerned, should contribute very largely to make traditional building construction much cheaper. In this group should be plastering and painting machines, improved and simplified fixings of all kinds.

Unit Manufacture and Supply.

The next big field of investigation into building is the manufacture of various units which can be incorporated in any design for any type of building. I have already referred to windows and doors. The standard partition is in urgent need of development. In offices where partitions frequently need to be moved, it is quite ridiculous to put in a semi-permanent or permanent type of partition which costs considerable sums of money every time it is altered. Yet, up to the present, any permanent type of partition is appreciably cheaper than its prefabricated alternative. Fireplace units in houses have been successfully prefabricated. This, no doubt, will continue and should have, perhaps, a more standardised outlook than it has at present. Steady standardisation of sanitary fittings has proceeded, but we have not yet seen sheet metal baths, or sheet metal sanitary fitting developed as they might be.

Kitchen fitments started development some time after the last war, so far as this country was concerned, in small imports. It is becoming more and more a matter of standardisation. Standardised kitchen fitments, standardised cupboards, standardised bathrooms, standardised plumbing can be so manufactured that units can be built up to suit different types of development, and be equally sucessful in each case.

Simplification of Requirements.

Building above everything else seems to be extremely difficult to pre-judge in its maintenance qualities. The weather, the human element, the actual wear and tear which takes place so far has defeated real attempts to make light construction successful. So far the basic costs which must inevitably be incurred in site preparation and other factors have precluded the ideas that you could buy a house, use it for three years, liquidate the capital cost and change it. There is nothing in present experience which will suggest that this condition of affairs will arise in the near future, and, therefore, any development which takes place on the part of the manufacturer should be towards rationalisation of building processes and the factory manufacture of building units. In these fields the largest industry in the country waits in the 20th Century for the application of invention, originality and organisation.

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THE A.A. SCHOOL

TECHNICAL TRAINING AND NEW SCHOLARSHIPS.

DURING the past two years the Council of the Architectural Association have been reviewing in great detail the present-day needs and possibilities of architectural training. They have had specially in mind the increasing emphasis now laid on the technical side of architecture. As a part of the post-war reorganisation of the A.A. School of Architecture, they are creating a technical section in order to familiarise students with processes and materials, old as well as new, at first hand, as well as to inculcate a scientific outlook in assessing the qualities of materials and methods of construction.

This technical section is being established with the active help of building industry manufacturers and trade associations who have undertaken to supply lectures, demonstrations, visits to works and buildings, etc. An open site near the school has been acquired, on which demonstration structures and parts of structures will be erected—work in which the students will themselves take part. This new scheme does not entail any reduction of the time taken up in design training, which must always remain the principal aim. Rather is it a new method of teaching building construction and technique to architectural students. It follows to some extent the new war time training methods of the British Army, in which demonstration and exercise play an important part. Further details will be announced when the scheme is in full operation.

A further aim of the council has been to broaden the basis of intake to the school. A group of building industry manufacturers and trade associations have now made this possible by presenting five new open entrance scholarships and two senior entrance scholarships. The open entrance scholarships, which are tenable for five years, are :—

The "Metal Window Scholarship" (presented by The British Metal Window Manufacturers' Assoc., Ltd.), value £75 per annum.

The "Pilkington Scholarship" (presented by Messrs. Pilkington Brothers, Ltd.), value £75 per annum.

The "Natural Asphalte Council Scholarship" (presented by The Natural Asphalte Mine-Owners' and Manufacturers' Council), value £50 per annum.

The "Northern Aluminium Scholarship" (presented by The Northern Aluminium Company), value £50 per annum.

The "Cement and Concrete Association Scholarship" (presented by The Cement and Concrete Association), value £50 per annum.

Thus, as a result of these generous offers, five new entrance scholarships will be available from the beginning of the next school year, which begins in September. The £75 scholarships are equivalent to free tuition and the £50 scholarships to two-thirds of the annual school fees. Each scholarship is renewable, subject to satisfactory progress by the student, allowing him to complete the full school course and to qualify for registration. The scholarships are intended for students whose means would not otherwise allow them to attend the school.

The senior entrance scholarships, which are tenable for two years, are :—

The "Metal Window Senior Scholarship" (presented by The British Metal Window Manufacturers' Assoc., Ltd.), value £50 per annum.

The "British Plywoods Scholarship" (presented by The Association of British Plywood Manufacturers), value £50 per annum.

These scholarships are to allow students of intermediate standard to enter the school, in particular, students from those schools of architecture which have only a three years' course. Again, they are intended for students of insufficient means. All the above scholarships are to be awarded as a result of examinations, to be held on July 31 next, personal interview and consideration of candidates' means.

Attention is also drawn to the three existing entrance scholarships, namely, the Leverhulme Scholarship, the Sir Walter Lawrence, and the Minter Open Entrance Scholarships. Full particulars of all scholarships can be obtained from the Secretary of the Architectural Association, 36, Bedford-square, London, W.C.1.

ARCHITECTS' BENEVOLENT SOCIETY

ANNUAL MEETING.

THE annual meeting of the Architects' Benevolent Society took place on May 2, when Mr. Percy E. Thomas, O.B.E., P.R.I.B.A., was re-elected President.

MR. THOMAS, in moving the adoption of the 95th Annual Report, Statement of Accounts and Balance-sheet, said : "You will notice from the report that the Society is going steadily ahead, both in the work it is doing and in the support it is receiving. But I think we all feel that it is not quite on the scale that we all wish. We are greatly handicapped at present by the paper shortage in our efforts to make the Society known, and here is a method by which members could help by acting as agents for the Society and persuading their friends to join. You will notice that we have recently issued a small leaflet describing the Society's work, copies of which can be obtained from the office; if members will send these to their friends who do not as yet subscribe, it would be most helpful.

"There is another matter to which I think I should refer—the Seven-Year Covenant Scheme. I feel that if we could develop this scheme it would be of great benefit to the Society, as it has the effect of doubling the amount received by the Society without extra cost to the subscriber."

The address of the Society is 66, Portland-place, W.1, and Miss B. N. Solly is Secretary.

LICENSING OF BUILDING WORK

STATEMENT BY THE MINISTER OF WORKS.

THE following statement on modifications in the licensing system for building work was made by the Minister of Works last week :—

Now that the European war is over, the building industry will be faced with pressing demands from all quarters which will greatly exceed its present capacity. Many people would be willing to pay rates far above the normal to get the work they want done and much of this might be of an unessential or luxury character. If no action were taken, there is little doubt that the demand for repairs and decoration work alone would force up building prices to a high level and would absorb the greater part of the labour which is needed to build new houses and to carry out essential repairs and other urgent work.

That is what happened after the last war. The Government are determined that it shall not happen again this time and that the country's limited resources of building labour shall not be frittered away on luxury projects or on a mass of unessential minor works. There must, therefore, be some effective machinery for settling priorities. With this object, it is proposed, as has already been announced, to apply a low licensing limit for building work throughout Great Britain.

Modified Licensing System.

The Minister of Works has been reviewing the practical experience gained during the last few months in London and the Home Counties, where the £10 licensing limit has been in force. Although the licensing machinery has worked smoothly under the special conditions prevailing in South East England, he has decided to make a number of important modifications in applying it to the rest of the country.

These changes are primarily designed to ease the task of the local authority staffs who will have to administer the scheme and to relax some of the more irksome restrictions upon the freedom of action of both householders and builders.

The main features of the modified licensing system will be as follows :—

(1) The new scheme will come into force throughout Great Britain, including London and the Home Counties, as from August 1, and will cover the period from that date to January 31, 1946.

(2) During this six months' period, building work costing up to £10 may be undertaken without a licence (*i.e.*, at the rate of £20 per annum).

(3) In addition, £2 worth of work may be undertaken in each calendar month from August to January. (This monthly allowance, which is not cumulative, has been introduced primarily to avoid applications for licences for trifling repairs.)

(4) Work of an emergency character (*e.g.*, the repair of burst pipes), may, of course, be undertaken without waiting for a licence.

(5) In reckoning the amount of work which may be undertaken without a licence (*i.e.*, up to £10 during the period, plus the additional £2 allowance in any one calendar month) no account will be taken of :—

(*a*) Work which has been licensed or authorised by a Government Department.

(*b*) Work undertaken by a local authority (*e.g.*, bomb-damage repair), or licensed by a local authority.

(c) Work carried out prior to August 1, 1945.

(6) Where work is carried out by an owner or occupier on premises occupied wholly or partly as a private dwelling, with his own personal labour, or with unpaid labour, the value of these services and the cost of any materials used will be disregarded.

(7) The £10 and £2 allowances will be applied to all separate dwellings individually. (Hitherto the great majority of block of flats and tenements were reckoned as one unit.)

(8) Owners of large properties such as large blocks of flats, or offices, large estates, etc., for which the £10 and £2 allowances would obviously be totally inadequate, may obtain maintenance licences to cover specified categories of maintenance and repairs over a period of twelve months.

(9) In cases where a local authority issues a Statutory Notice on grounds of public health, danger, etc., a licence will automatically be granted.

(10) The Minister of Works will delegate to local authorities the power to issue licences on his behalf in respect of work costing less than £100.

(11) Licences for amounts above £100 will be granted by the Ministry of Works Regional Licensing Officers. Where an owner or occupier wishes to build, repair, adapt or convert a dwelling-house, at a cost exceeding £100, the local authority will, as hitherto, consider whether the work in question is essential and, if so, will grant a "Certificate of Essentiality." On receipt of such a certificate, the Regional Licensing Officer of the Ministry of Works will normally grant a licence.

(12) The powers thus given to local authorities of issuing licences for all works costing up to £100 and of issuing "Certificates of Essentiality" for housing work above that sum, will enable the local authorities to decide for themselves, in the light of local needs, the respective priorities to be accorded to various types of building work, and to ensure that their housing programmes are not prejudiced by the carrying out of less essential building projects.

TOTAL LOSS WAR DAMAGE CASES

CLEARANCE OF USELESS REMAINS.

THE War Damage Commission announces the receipt of a Treasury Direction, made in the public interest under Section 20 of the War Damage Act, with reference to the clearance of useless remains in total loss cases. The direction deals with those value payment cases where débris or the remains of buildings and structures are left on, or comprised in, the site of a destroyed hereditament. If the Commission is satisfied that reinstatement or redevelopment of the hereditament would be both probable and reasonable, and that the débris or remains could not reasonably be incorporated in the new works, it is empowered to pay the reasonable net expense of removal, after allowing for the value of any materials recovered, as a cost of works payment. This payment will be additional to the value payment, which will be calculated as though the remains had been removed by the bomb.

The power is not to be exercised where it would be unjust to an owner. The Commission should be consulted in any case of doubt.

War Damage Repairs: Percentage Additions in Cost Plus Cases.

The final line of figures in the table given in the notice under the above heading, published in our last issue, should read: £75,001—100,000—11—£8,625.

FORTHCOMING LEGISLATION

Building Restrictions (War-Time Contraventions) Bill.

THE object of this Bill, presented to Parliament on May 18, by the Minister of Health (Mr. Henry Willink) and the Secretary for Scotland (Mr. Thomas Johnston), is to secure that works and buildings erected during the war:—

(i) Shall not, during the war, be subject to legal proceedings for alleged breaches of existing building laws or planning controls.

(ii) May remain after the war subject to the approval of the appropriate local authority (which may limit the period, or lay down conditions) even though they do not comply with the law.

The great majority of the works and buildings erected during the war have been for war purposes. Some are Government property, others have been put up on privately owned land, in some cases with Exchequer assistance. Local authorities—often as a result of Government representations—have refrained from enforcing normal legal provisions.

The Bill protects the right of local authorities to enforce the normal law, which they might otherwise have lost by lapse of time; and provides that owners and others interested—including prospective purchasers—will be able to ask the appropriate local authority to clarify and determine the position. There will be a right of appeal to the Minister of Health or Secretary for Scotland against a local authority's decision, not only by the owner or lessee but also by anyone interested—for instance, the owner of adjoining property.

The Minister's decision will be final, subject to the right to make a further application if there is a material change of circumstances, and to the right to have a case stated for the opinion of the Court on a point of law.

Works and buildings in Crown occupation are not subject to the ordinary law in these matters; but where sale or long lease is in prospect and there is a possibility that building law or planning control has been contravened, a Government Department will be able to get the position clarified in the same way as an individual owner, lessee or occupier, or intending purchaser or lessee.

In order to preserve the principle of central control of certain planning issues, the Minister of Town and Country Planning may direct that any application to a local planning authority must be referred directly to the Minister of Health. The Minister will then make his decision in consultation with the Minister of Town and Country Planning. The Bill makes corresponding provisions for Scotland.

Housing (Temporary Accommodation) Bill, 1945.

The object of this Bill, presented on May 18 by the Minister of Health (Mr. Henry Willink) and the Secretary of State for Scotland (Mr. Thomas Johnston), is to provide a speedier procedure by which local authorities may be authorised, in suitable cases, to erect temporary houses in their own parks and open spaces. At present, procedure by Provisional Order is necessary before a local authority can appropriate land vested in the authority as an open space without providing equivalent land in exchange. This procedure is slow. The Bill proposes that for a limited period of two years, the Minister of Health (in Scotland, the Secretary of State) may authorise a local authority to use sites in parks or open spaces for temporary housing, but only on condition that:—

(1) The Minister of Town and Country Planning (in Scotland the Secretary of State) certifies that the use of the particular land is expedient in the public interest in the emergency.

(2) The temporary houses must be removed after not more than ten years, and the land restored.

The application must come from the local authority, and must relate only to land vested in the authority as an open space. The Planning Minister will not give a certificate until a special survey has been made reviewing all classes of unbuilt-on land in the area and he is satisfied that there are no alternative sites available having regard to sound planning.

Housing (Rural Workers) Amendment Bill, 1945.

This Bill, presented by the Minister of Health, the Secretary for Scotland and the Minister of Agriculture, proposes to:—

(1) Increase the limits of grants which local authorities may make for the reconditioning of rural workers' cottages.

(2) Extend the operation of the existing Housing (Rural Workers) Acts as amended for a further two years, to September, 1947.

The present Acts empower local authorities to make grants or loans to owners towards reconditioning costing not less than £50 per cottage (the object of the £50 limit to exclude works of ordinary repair; which the owner is under a statutory liability to carry out at his own expense). The cottages must be reserved for the occupation of agricultural workers for the next 20 years. Half of the grant made to the owner is borne by the Exchequer and half by the local rates.

The Bill proposes the following changes:—(1) The minimum grant to be £75 instead of £50; (2) the maximum grant to be £200 instead of £100 (or in cases where a further grant is given for abatement of overcrowding, £250 instead of £150; (3) the present limit of £400 as the value of a cottage after reconditioning to be abolished.

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PREPARATION OF HOUSING SITES

USE OF GERMAN PRISONERS OF WAR.

IN a circular, No. 90/45, issued to Housing Authorities, the Ministry of Health state that as the supply of labour available at the present time is not sufficient to ensure the speedy preparation of the sites which are required for permanent and temporary houses, the Government have been considering what action can best be taken to expedite this work and have decided to make use of German prisoners of war. These can be made available for the preparation of (*a*) sites selected for temporary houses which have been allocated to the local authority; (*b*) sites which form part of the local authority's programme for the erection of permanent houses during the next two years. Payment for the prisoner of war labour will be made by the council to the Ministry of Works on the basis of the normal trade union rates.

Technical Assistance.

The Minister appreciates that difficulties are being experienced in a number of areas by local authorities in obtaining the necessary technical assistance for the preparatory work required before development can begin. To overcome these difficulties one or other of the following alternatives should be adopted:—

1. As this work is of the highest priority the local authority should consider whether they can make available staff of their own from other departments even at the expense of some delay to work of less urgency.

2. The local authority should make arrangements for the employment of private professional firms. A list is being prepared of architects, engineers and surveyors who would be prepared to undertake this work on the appropriate scale of fees. It will be for the local authority to make their own arrangements for paying for the services of any firms engaged for the preparation of drawings or other work in connection with roads and sewers, etc.

It is important that the progress of development and the subsequent erection of houses should not be impeded if the problem can be solved by one or other of these means.

M.O.W. and Advance Preparation.

In a memorandum enclosed with Circular 90/45, the terms on which Ministry of Works will undertake work for local authorities on advance preparation of housing sites are outlined. There will be three types of case:—

(*a*) Where a contract already exists (or tenders have been invited) the contract will be determined and the Ministry of Works will make fresh arrangements either with the original contractor (or the firm submitting the lowest satisfactory tender) or with another contractor for the management of prisoners of war.

(*b*) Where no contract exists and no tenders have been invited, the Ministry of Works will arrange and supervise a contract, using prisoner of war labour, the local authority preparing the layout drawings and specifications as for a normal contract.

(*c*) Alternatively, where no contract exists and no tenders have been invited, the Ministry of Works undertake everything, that is the preparation of the layout and all other plans and appropriate contract documents and supervise the execution of the work.

The financial terms suggested are:—

In (*a*) the local authority will pay to the Ministry of Works whatever payments they would have had to make in connection with the original contract (or if they had accepted the lowest satisfactory tender).

In (*b*) the local authority pay for the work on the basis of the prices in the priced bills of quantities prepared by the Ministry of Works for the advanced preparation of housing sites, with appropriate allowances for the unpriced items in the summary, subject to a percentage adjustment to reflect variations in the general level of costs for this class of work and plus 2½ per cent. of the final amount to cover overheads and other incidental work, including supervision and final settlement of contracts by Minister of Works.

In (*c*) the local authority pay the cost of the work as in (*b*), plus 4 per cent. to cover preparation of all plans, details, documents, overheads, supervision of the work and final settlement.

While these terms relate only to contracts on which it is proposed to employ prisoners of war, they will not be affected if it subsequently becomes necessary to use other labour on these contracts.

DEMOBILISATION AND THE HOUSING PROGRAMME

AN A.B.T. STATEMENT.

IN a statement the Association of Building Technicians draw attention to the fact that the ending of the war in Europe raises sharply the question of the demobilisation of building technicians. Although the task of our armed forces is by no means finished, and there will be severe shortages of labour and materials for a long time to come, both Government and public agree that the erection of houses and the necessary accompanying buildings must be pushed forward with maximum speed. Local authorities all over the country are finding proper planning impossible because of the lack of trained staff. It is, therefore, a matter for serious concern—and not least to those in the Forces—that the Government has so far refused to agree to the accelerated demobilisation of building technicians.

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The statement continues: "The Minister of Labour and National Service, in his recent Parliamentary reply to Mr. A. C. Bossom, refused to face the facts. He was unable to say that there would be enough architects and surveyors to enable the Government's announced programme (small though it is) to be completed in the first two post-war years. He indicated that the number of architects would be inadequate in relation to the number of operatives. But he refused to take any action as a result. Instead, he condemned the 'effort to put pressure upon me for certain professions to get their men out in advance of the ordinary man.' Mr. Bevin has a fine record of standing up for the ordinary man, and we owe him much for it, but in this instance it is clear that the interests of the ordinary man require just that action which the Minister refused to take. The ordinary man demands that our new housing shall be better than that of the pre-war period. This better housing *cannot possibly be provided* unless technical advice of the highest quality is made available at once.

"Demobilisation can easily become the centre of intrigue and discontent, and we heartily approve Mr. Bevin's suspicion of the claims of sectional interests. We would suggest, however, that the Cabinet should study the problem for themselves, get the facts from their own officers, and see whether present demobilisation plans will enable them to fulfil the housing programme to which they are committed."

IN PARLIAMENT

Bomb Damage Repairs.

In reply to questions by LADY ASTOR, MR. SANDYS replied that the need for labour for bomb damage repair in London was still very great and large releases of men could not yet be contemplated. He was, however, arranging that men will be allowed to return to provincial cities where there was still a heavy programme of repairs outstanding and the labour shortage is especially acute. The extent of the extra damage in London had never been fully understood. In point of fact, by the time that London had completed its emergency standard "winter programme," another substantial problem had arisen from rocket damage.

LADY ASTOR: Does my right hon. friend understand that other bombed-out areas have even greater need in some ways than London, because they have been entirely wiped out?

MR. SANDYS: The noble lady may be glad to know that Plymouth is one of the cities to which we shall return men; also Hull, Yarmouth and Lowestoft.

In reply to MR. LAWSON, MR. SANDYS said that the cutting out of Sunday work must, of course, result in some reduction in earnings. However, he was convinced that continuous working for seven days a week was neither efficient nor economical and was in the long run prejudicial to health.

In reply to MR. SORENSEN, MR. SANDYS said that there were about 37,000 building and civil engineering workers in the London Civil Defence Region engaged on work other than war damage repairs. They were aiming at achieving the release of 235,000 men from the Forces by the end of the first post-war year, of whom London would receive its appropriate share. The supply of building materials should prove adequate provided suitable alternatives and substitutes were fully utilised.

In reply to SIR E. SPEARS, MR. SANDYS said that he had arranged for technical representatives of the Ministry of Works to go to Germany to examine the possibility of obtaining prefabricated houses from that country.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1945.

(Every endeavour is made to ensure accuracy, but we cannot be responsible for errors)

	Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.
Aberavon	2/1	1/8	Cleveleys	2/1	1/8	Isle of Thanet	1/11	1/6½	Saxmundham	1/11	1/6½
Aberdare	2/1	1/8	Clitheroe	2/1	1/8	Isle of Wight	1/11	1/6½	Scarborough	2/0½	1/7½
Abergavenny	2/1	1/8	Cobham (Surrey)	2/0	1/7½	Keighley	2/1	1/8	Scunthorpe	2/1	1/8
Abingdon	1/11½	1/7	Colchester	2/0½	1/7½	Kemilworth	2/1	1/8	Selby	2/1	1/8
Accrington	2/1	1/8	Colwyn Bay	2/0	1/7½	Kettering M.B.	2/1	1/8	Sevenoaks	1/11½	1/7
Aldeburgh	1/11	1/6½	Congleton	2/0½	1/7½	Kidderminster M.B.	2/0½	1/7½	Sheerness	1/11	1/6½
Aldershot	1/11½	1/7	Coventry C.B.	2/1	1/8	King's Lynn	1/11	1/6½	Sheffield	2/1	1/8
Alfreton U.D.	2/1	1/8	Cranbrook	1/11	1/6½	Kirkham	2/1	1/8	Shipley	2/1	1/8
Alnwick	2/0½	1/7½	Cranleigh	1/11	1/6½	Knowle	2/0½	1/7½	Shoeburyness	2/0½	1/7½
Altrincham	2/1	1/8	Crawley (Sussex)	1/11	1/6½	Lancaster	2/1	1/8	Shoreham	2/0	1/7½
Amble	2/0½	1/7½	Crewe	2/0½	1/7½	Leamington M.B.	2/1	1/8	Shrewsbury M.B.	2/0½	1/7½
Amersham	1/11½	1/7	Cromer	1/11	1/6½	Leatherhead	2/0	1/7½	Sittingbourne	1/11	1/6½
Ammanford	2/1	1/8	Crowborough	1/11	1/6½	Leeds	2/1	1/8	Skegness U.D.	2/0	1/7½
Andover	1/11	1/6½	Cuckfield	1/11	1/6½	Leicester C.B.	2/1	1/8	Sleaford U.D.	1/11½	1/7
Ardingly	1/11	1/6½	Darlington	2/1	1/8	Leighton Buzzard	1/11½	1/7	Slough	2/0	1/7½
Arundel	1/11	1/6½	Darwen	2/1	1/8	Letchworth	2/0	1/7½	Smethwick C.B.	†2/1	†1/8
Ascot	1/11	1/6½	Daventry M.B.	1/11½	1/7	Lewes	1/11	1/6½	Southampton	2/0½	1/7½
Ashby-de-la-Zouch U.D.	2/1	1/8	Deal	1/11	1/6½	Lichfield M.B.	2/0	1/7½	Southend-on-Sea	2/0½	1/7½
Ashford (Kent)	1/11	1/6½	Denbigh Town	2/0	1/7½	Lincoln C.B.	2/1	1/8	Southport	2/1	1/8
Ashford (Middlesex)	2/1	1/8	Derby C.B.	2/1	1/8	Littlehampton	1/11	1/6½	South Shields	2/1	1/8
Ashington	2/0½	1/7½	Devizes	1/11	1/6½	Liverpool	‡§2/1	¶	Spalding U.D.	1/11	1/6½
Ashtead	2/1	1/8	Dewsbury	2/1	1/8	Llandudno	2/0	1/7½	Stafford M.B.	2/0½	1/7½
Ashton-under-Lyne	2/1	1/8	Didcot	1/11	1/6½	Llanelly	2/1	1/8	Staines	2/0	1/7½
Aylesbury	1/11	1/6½	Diss	1/11	1/6½	London—			Stamford M.B.	2/0	1/7½
Aylsham	1/11	1/6½	Doncaster	2/1	1/8	12 m. radius	2/2½	1/9½	Stevenage	2/0	1/7½
Bagshot	1/11	1/6½	Dorchester	1/11	1/6½	12-15 m. radius	2/2	1/9	Stockport	2/1	1/8
Banbury	1/11	1/6½	Dorking	1/11½	1/7	Long Eaton U.D.	2/1	1/8	Stockton-on-Tees	2/1	1/8
Barnsley	2/1	1/8	Dover	1/11	1/6½	Longton	2/1	1/8	Stoke-on-Trent C.B.	2/1	1/8
Barnstaple	1/11	1/6½	Dovercourt	1/11	1/6½	Loughborough M.B.	2/1	1/8	Stourbridge M.B.	2/1	1/8
Barrow-in-Furness	2/1	1/8	Driffield	1/11½	1/6½	Louth M.B.	1/11½	1/7	Stourport U.D.	2/0½	1/7½
Barry	2/1	1/8	Droitwich M.B.	2/0½	1/7½	Lowestoft	1/11	1/6½	Stowmarket	1/11	1/6½
Basingstoke	1/11	1/6½	Dudley M.B.	2/1	1/8	Luton	2/0½	1/7½	Stratford-on-Avon M.B.	2/0	1/7½
Bath	2/0½	1/7½	Dunstable	1/11½	1/7	Macclesfield	2/0½	1/7½	Stroud	2/0	1/7½
Batley	2/1	1/8	Durham City	2/1	1/8	Maidenhead	2/0	1/7½	Sunderland	2/1	1/8
Beaconsfield	1/11½	1/7	E. Glam. (Mon. Val.)	2/0	1/7½	Maidstone	1/11½	1/7	Sutton Coldfield M.B.	2/1	1/8
Beccles	1/11	1/6½	East Grinstead	1/11	1/6½	Malvern U.D.	1/11½	1/7	Swaffham	1/11	1/6½
Bedford	2/0½	1/7½	Edenbridge	1/11	1/6½	Manchester	2/1	1/8	Swanage	1/11	1/6½
Berkhamsted	1/11	1/6½	Ely	1/11	1/6½	Manningtree	1/11	1/6½	Swansea	2/1	1/8
Berwick	2/0½	1/7½	Epping	2/1	1/8	Mansfield M.B.	2/1	1/8	Swindon	1/11½	1/7
Beverley	2/1	1/8	Exeter	2/0½	1/7½	March	1/11	1/6½	Tamworth M.B.	2/0½	1/7½
Bexhill	1/11½	1/7	Exmouth	1/11½	1/7	Margate	1/11	1/6½	Taunton	1/11½	1/7
Bideford	1/11	1/6½	Fakenham	1/11	1/6½	Market Harborough	2/0	1/7½	Tenterden	1/11	1/6½
Biggleswade	1/11	1/6½	Falmouth	1/11½	1/7	Matlock U.D.	1/11½	1/7	Thames Haven	2/1	1/8
Billericay	2/0	1/7½	Fareham	2/0	1/7½	Melton Constable	1/11	1/6½	Thetford	1/11	1/6½
Birchington	1/11	1/6½	Faversham	1/11	1/6½	Melton Mowbray	2/0	1/7½	Thorpe Bay	2/0½	1/7½
Birkenhead	‡§2/1	¶	Felixstowe	2/0	1/7½	Merthyr	2/1	1/8	Todmorden	2/1	1/8
Birmingham C.B.	†2/1	†1/8	Filey	1/11½	1/7	Middlesbrough	2/1	1/8	Tonbridge	1/11½	1/7
Bishop Auckland	2/1	1/8	Fleetwood	2/1	1/8	Middleton	2/1	1/8	Torquay	2/0½	1/7½
Bishop's Stortford	2/0	1/7½	Flint	2/1	1/8	Middlewich	2/0½	1/7½	Totnes	1/11	1/6½
Blackburn	2/1	1/8	Folkestone	1/11	1/6½	Milford Haven	1/11½	1/7	Trowbridge	1/11	1/6½
Blackpool	2/1	1/8	Frinton	1/11	1/6½	Morecambe	2/1	1/8	Truro	1/11	1/6½
Blyth	2/1	1/8	Frome	1/11	1/6½	Morley	2/1	1/8	Tunbridge Wells	1/11½	1/7
Bognor Regis	1/11	1/6½	Gainsborough U.D.	2/0	1/7½	Mundesley	1/11	1/6½	Uppingham (Salop)	2/0½	1/7½
Bolton	2/1	1/8	Gateshead	2/1	1/8	Nantwich	2/0½	1/7½	Uttoxeter U.D.	1/11½	1/7
Bournemouth(District)	2/0	1/7½	Gillingham (Kent)	2/0	1/7½	Nelson	2/1	1/8	Wakefield	2/1	1/8
Bracknell	1/11	1/6½	Glossop	2/1	1/8	Newark-on-Trent	2/0½	1/7½	Walsall C.B.	2/1	1/8
Bradford	2/1	1/8	Gloucester	2/0½	1/7½	Newbury	1/11	1/6½	Walsden	2/1	1/8
Bradford-on-Avon	1/11	1/6½	Godalming	1/11	1/6½	Newcastle-on-Tyne	2/1	1/8	Walton-on-Naze	1/11	1/6½
Braintree	1/11	1/6½	Goole	2/1	1/8	Newcastle-u.-Lyme	2/1	1/8	Ware	2/0½	1/7½
Brentwood	2/0½	1/7½	Gosport	2/0½	1/7½	New Forest (District)	1/11	1/6½	Warminster	1/11	1/6½
Bridgwater	1/11½	1/7	Grantham M.B.	2/0	1/7½	Newmarket	1/11	1/6½	Warrington	2/1	1/8
Bridlington	2/0½	1/7½	Gravesend	2/0½	1/7½	Newport, Mon.	2/1	1/8	Warwick M.B.	2/1	1/8
Brighouse	2/1	1/8	Great Yarmouth	1/11	1/6½	Newport Pagnell	1/11	1/6½	Wellington R.D.	2/0½	1/7½
Brighton	2/0	1/7½	Grimsby	2/1	1/8	Northampton C.B.	2/1	1/8	Welwyn	2/0	1/7½
Bristol	2/1	1/8	Guildford	1/11	1/6½	Norwich	2/1	1/8	Welwyn Gar. City	2/1	1/8
Broadstairs	1/11	1/6½	Guilsborough	1/11½	1/7	Nottingham C.B.	2/1	1/8	Wells (Norfolk)	1/11	1/6½
Bromsgrove U.D.	2/0½	1/7½	Halifax	2/1	1/8	Nuneaton M.B.	2/1	1/8	West Bromwich C.B.	2/1	1/8
Buckley	2/1	1/8	Hanley	2/1	1/8	Oakham U.D.	1/11½	1/7	Westcliff-on-Sea	2/0½	1/7½
Bungay	1/11	1/6½	Harpenden	2/0	1/7½	Oldham	2/1	1/8	Weston-super-Mare	2/0	1/7½
Burnham-on-Crouch	1/11	1/6½	Harrogate	2/1	1/8	Ormskirk	2/1	1/8	Weybridge	2/0	1/7½
Burnley	2/1	1/8	Hartlepools	2/1	1/8	Oxford	2/0½	1/7½	Weymouth	1/11	1/6½
Bursiem	2/1	1/8	Harwich	1/11	1/6½	Oxted	1/11½	1/7	Whitby	2/0	1/7½
Burton-on-Trent C.B.	2/1	1/8	Haslemere	1/11	1/6½	Paignton	2/0½	1/7½	Whitstable	1/11	1/6½
Bury	2/1	1/8	Hastings	1/11	1/6½	Peterborough (Borough)	2/0½	1/7½	Widnes	2/1	1/8
Bury St. Edmunds	1/11	1/6½	Hatfield	2/0½	1/7½	Plymouth	2/1	1/8	Wigan	2/1	1/8
Buxton	2/0½	1/7½	Haywards Heath	1/11	1/6½	Pontefract	2/1	1/8	Wigton	1/11½	1/7
Byfleet	1/11½	1/7	Hednesford	2/0½	1/7½	Pontypridd (District)	2/1	1/8	Willington	2/1	1/8
Cambridge	2/1	1/8	Hemel Hempstead	2/0	1/7½	Port Talbot	2/1	1/8	Wilmslow	2/1	1/8
Canterbury	1/11	1/6½	Henley-on-Thames	1/11	1/6½	Portsmouth	2/0½	1/7½	Winchester	1/11½	1/7
Cardiff	2/1	1/8	Hereford	1/11	1/6½	Preston	2/1	1/8	Windermere	1/11½	1/7
Carlisle	2/1	1/8	Herne Bay	1/11	1/6½	Pulborough	1/11	1/6½	Windsor	2/0	1/7½
Carnforth	2/1	1/8	Hertford	2/0½	1/7½	Ramsgate	1/11	1/6½	Wisbech	1/11	1/6½
Castleford	2/1	1/8	Heysham	2/1	1/8	Reading	2/0½	1/7½	Witham	1/11	1/6½
Caterham	2/1	1/8	Hitchin	2/0	1/7½	Redditch U.D.	2/0½	1/7½	Woking (District)	1/11½	1/7
Chard	1/11	1/6½	Hoddesdon	2/0½	1/7½	Redhill	1/11½	1/7	Wokingham	1/11	1/6½
Chatham	2/0	1/7½	Holt (Norfolk)	1/11	1/6½	Ripon	1/11½	1/7	Wolverhampton C.B.	2/1	1/8
Chelmsford	2/0½	1/7½	Horley	1/11	1/6½	Rochdale	2/1	1/8	Woodbridge	1/11	1/6½
Cheltenham	2/0	1/7½	Horsham	1/11	1/6½	Rochester	2/0	1/7½	Worcester C.B.	2/0½	1/7½
Chepstow	2/0½	1/7½	Horwich	2/1	1/8	Rugby M.B.	2/1	1/8	Workington	1/11½	1/7
Chertsey	2/0	1/7½	Huddersfield	2/1	1/8	St. Albans	2/0½	1/7½	Worksop	2/0½	1/7½
Chester	2/1	1/8	Hull	2/1	1/8	St. Helens	2/1	1/8	Worthing	1/11	1/6½
Chesterfield M.B.	2/1	1/8	Hunstanton	1/11	1/6½	St. Neots	1/11	1/6½	Wrexham	2/0½	1/7½
Chichester	1/11	1/6½	Huntingdon	1/11	1/6½	Saffron Walden	1/11	1/6½	Wroxham	1/11	1/6½
Chorley	2/1	1/8	Ilfracombe	1/11	1/6½	Salisbury City	1/11	1/6½	Wycombe	2/0	1/7½
Cirencester	1/11	1/6½	Ingatestone	1/11½	1/7	Salisbury Plain	1/11	1/6½	Wymondham	1/11	1/6½
Clacton	1/11	1/6½	Ipswich	2/0½	1/7½	Sawbridgeworth	1/11½	1/7	Yeovil	1/11½	1/7
									York	2/1	1/8

† Plus 2d. per working day. ‡ Plasterers 2/1½. ¶ Tradesmen's Labourers, 1/7½. Navvies and General Labourers, 1/6½.
§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

NOTE.—Carpenters, Joiners and Plumbers in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d. per day Tool Allowances.

WOMEN'S RATES.—In all districts throughout the country the rate of wages for women engaged on craft processes is 1/7½ per hour. Women introduced to carry out work other than craft processes, 1/4 per hour.

For Building Trade Wages in Scotland, see page 444.

PRICES CURRENT OF MATERIALS*

NOTE.—These prices apply to large quantities of materials at works at London stations, or site, in London area as stated. Prices for smaller quantities ex merchant's warehouse will of course be higher. Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery.

BRICKS, &c.

	£ s. d.
First Hard Stocks	4 17 0
Second Hard Stocks	4 10 0
Mild Stocks	3 17 0
Single Rough Stocks	3 11 0
Common Stocks	3 1 6

All loaded free into lorry at the works. The question of haulage is still very difficult and prices must be obtained from job to job. *In addition*, there will be the Levy under the Bricks (Charges) Order, 1942, of 3s. per 1,000.

	Site in London Rated Area, Stations	London North of Thames
2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	per 1,000 s. d.	per 1,000 s. d.
Pressed	59 3	69 3
Keyed	61 3	71 3
Single Bullnose	79 3	89 3
Rustics	79 3	89 3
Whites	79 9	89 3
	£ s. d.	£ s. d.
Best blue Pressed Staffs. (London Stns.)	11 14 0	
Do. Bullnose (London Stns.)	12 4 0	
Blue Wire Cuts (London Stns.)	10 11 6	

Best Stourbridge Fire Brick (London Stns.) :—

£ s. d.	£ s. d.
2½ in. 10 2 0	3 in. 12 2 0

GLAZED BRICKS (London Stns.). Add 12½% to Prices.

Best White Ivory and Salt Glazed Stretcher	30 0 0	D'ble Str'tch'rs	38 10 0
Headers	29 10 0	D'ble Headers	35 10 0
Quoins, Bullnose and 4½in. Flats	36 10 0	One side & two ends	39 10 0
		Two sides & one end	40 10 0
		Splays and Squints	38 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

ADD LEVY ON BRICKS, 3/- per 1,000 except Glazed Bricks.

PARTITION SLABS.

Delivered London Area.
12 miles radius Charing Cross.

HOLLOW CLAY PARTITION BLOCKS.
London Brick Company.

Minimum Lorry Loads. Keyed.	s. d.
2" per yd. sup. 120 yds.	2 9
2½" " " 110 "	3 0
3" " " 100 "	3 7
4" " " 84 "	4 1

Half blocks *add* 2s. per yard super to above prices.

CLINKER CONCRETE.

2" per yd. sup.	2 11	3" per yd. sup.	3 10
2½" " "	3 4	4" " "	4 10

CRANHAM TERRA COTTA.

Size 12 x 9 x 2"	per yd. super		2 9
Size 12 x 9 x 2½"	" "		3 0
Size 12 x 9 x 3"	" "		3 7
Size 12 x 9 x 4"	" "		4 1

HEMPSTEAD—KEYED TWO SIDES.

12 x 9 x 2"	2 9	12 x 9 x 3"	3 7
12 x 9 x 2½"	3 0	12 x 9 x 4"	4 1

Per yard super d/d. Free on site, London.
Plus 2d. for smooth one side, and 4d. for smooth both sides.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	3 3½
BEER STONE—RANDOM BLOCK— Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.	
PORTLAND STONE— Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R. per ft. cube	4 7
Do. do. delivered on road waggons as above stations per ft. cub.	4 7
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.	
HOPTON-WOOD STONE— F.O.R. Quarries, Wirksworth, Derbyshire.	s. d.
Random blocks from 10ft. and over P.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality*. Delivered at any Goods Station, London,	
6 in. sawn two sides landings to sizes (under 30 ft. super) per ft. super	5 6
6 in. rubbed two sides, ditto "	6 3
3 in. sawn two sides slabs (random sizes) "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) "	1 8½
1½ in. to 2 in. ditto "	1 4½
HARD YORK— Delivered at any Goods Station, London.	
Scrappled random blocks . per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) per ft. super	5 7½
6 in. rubbed two sides, ditto "	6 9
4 in. sawn two sides slabs (random sizes) "	3 5
3 in. ditto ditto "	2 8
2 in. self-faced random flags . . per yd. super	8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube : Plain, 10s. ; Moulded, 12s. 6d.
Small section cills and copings, 15s.

SAND.

Thames Ballast	11s. 6d. per yd.	delivered 2 miles radius Paddington.
Pit Ballast	10s. 0d. " "	
Pit Sand	12s. 0d. " "	
Washed Sand	13s. 0d. " "	
¼ in. Shingle	10s. 6d. " "	
¼ in. Broken Brick	16s. 0d. " "	
Pan Breeze	10s. 0d. " "	

CEMENT.

Best British Portland Cement.	Standard Specification, delivered London area	£ s. d.
6 ton loads and upwards site	per ton	2 17 0
1 to 6 tons site		3 0 0
Alongside Vauxhall in 80-ton lots		2 14 6
"Ferrocrete" Rapid Hardening Cement— 6 ton loads and upwards site		3 3 0
1 to 6 tons site		3 6 0
Alongside Vauxhall in 80-ton lots		3 0 6
"Aquacrete" Water Repellent, "Blue Circle" cement, 30s. per ton on ordinary "Blue Circle" prices.		
"Colorcrete" Nos. 1 and 2. Coloured rapid Hardening Portland Cement in 6-ton lots		4 17 0
"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.		
"Snowcrete" White Portland Cement (in free paper bags)		11 5 0
Under one ton	per cwt.	0 13 2
"417" Cement (Ultra Rapid Hardening) Delivered Site London Area in 5 ton lots and upwards		3 11 0
Plus packages at current prices.		
Super Cement (Waterproof), bags extra		4 7 0

NOTE.—Jute sacks charged 35s. 6d. nett per ton (20 sacks) for quantities of or exceeding one ton.
Less than one ton 1s. 9½d. nett each.
Credit 1s. 6d. nett each when returned in good condition within two weeks.

£ s. d.	£ s. d.
Roman Cement 8 10 0	Keene's Cement, White 7 0 0
Parian Cement 7 0 0	" " Pink 6 10 0

Cementone Colours for cement according to tints, per cwt. from £3 5s. 0d.

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station, Per 1,000 actual

£ s. d.	£ s. d.
24 by 12 52 0 0	18 by 10 27 2 6
22 by 12 41 17 6	18 by 9 25 7 6
22 by 11 38 0 0	16 by 10 24 5 0
20 by 12 36 17 6	16 by 8 18 15 0
20 by 10 33 17 6	

NOTE: Breakage in transit, purchasers' responsibility.

KING SLIDING DOOR GEAR

Write for fully illustrated booklet showing all types of King Sliding Door Gear

GEO. W. KING LTD HITCHIN · HERTS ·
HITCHIN 960 (10 lines) | MANCHESTER CENTRAL 3947 | NEWCASTLE 24198 | GLASGOW DOUGLAS 2798

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 2 6	Sirapite, Coarse	4 11 6
" White	4 10 0	" Finish	4 19 6
Pioneer	5 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue Lias Lime	3 7 6	Grey Stone Lime	3 1 0
		Chalk Lime	3 1 0
Granite Chippings	2 0 0	Hair per cwt.	3 15 0

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d. if returned in good condition within three months, carriage paid.
Stourbridge Fireclay in paper bags, £2 12s. 6d., 6-ton lots at railway depot.

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000 f.o.r. London.

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district	7 16 0
Ditto hand-made ditto	8 10 0
Ornamental ditto	8 19 0
Hip and valley tiles—Hand-made	17 6
(per dozen) —Machine-made	16 6

NOTE: Breakage in transit, purchasers' responsibility.

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality	Foot cube. s. d.		£ s. d.
Dry English Wainscot Billets	16 0	to	0 18 0
Dry Slavonian Billet Wainscot	17 0	to	1 0 0
Dry Cuba Mahogany logs	21 0	to	1 4 0
Square-edged Honduras Mahogany			0 16 6
Log Cut Honduras Mahogany			0 17 6
American Figured Oak			0 13 0
American Plain Oak			0 12 6
Jap, Figured Oak			0 13 0
Jap, Plain Oak			0 12 6
Teak			0 15 6
American Whitewood			0 12 6
African Whitewood			0 8 0
African Mahogany			0 11 0
Australian Walnut			0 19 0
Australian Silky Oak			0 12 6
Best Scotch glue	per cwt.		5 0 0
Liquid glue	per gallon		1 2 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes		
2 in. by 3 in. to 4 in. by 11 in.	47 0 0	58 0 0

PLANED BOARDS.
PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in, by 11 in. } 1 in by 9 in. }	71 0 0
	Per square. s. d.
1 in. plain edge flooring	56 3
1½ in. ditto	70 6
1 in. tongued and grooved	56 3
1½ in. ditto	70 6

MATCHING.

	per square. s. d.
⅝ in.	40 3
¾ in.	45 0
1 in.	59 0

PLUMBERS' BRASS WORK.

Delivered in London.
M.O.H.

S.D. BIBCOCKS CRUTCH HEAD, FOR IRON

½ in.	¾ in.
33/-	51/- per doz.

TOILET BIB COCKS FOR IRON.

½ in.	¾ in.
60/-	72/- per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
33/-	48/-	86/-	209/-	281/-	456/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
45/-	71/6	123/-	240/-	372/-	624/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
5/6	6/8	11/-	24/-	36/-	56/- per doz.

HEAVY CROYDON BALL VALVES.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
72/-	115/-	144/-	288/-	384/- per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
14/-	18/6	25/9	45/3	64/9	71/6 per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½in.	4 in.
10/9	13/6	25/-	37/-	46/- per doz.

LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½ × 6 lbs.	1½ × 6 lbs.	2 × 7 lbs.	3 × 7 lbs.
Lead P.	26/-	34/-	55/-	92/- per doz.
Lead S.	34/-	41/-	67/-	115/- per doz.

SOLDER.—Plumbers', 1/7. Tinmen's, 2/1. Blow pipe 2/6 per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)

See Note at top of preceding page.

METALS.

JOISTS, GIRDERS, &C., TO LONDON STATION, PER TON—

	£	s.	d.
R.S. Joists, cut and fitted	£24	0	0
Plain Compound Girders	26	10	0
Stanchions	29	0	0
In Roof Work	37	10	0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£	s.	d.	Diameter.	£	s.	d.
¼ in.	23	5	0	½ in.	21	15	0
⅜ in.	22	15	0	⅝ in. to 2¼ in.	21	5	0
⅞ in.	22	5	0				

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½% gross.

10/17

	Tubes. ½"/6" %	Tubulars, and ½"/6" %	19/24" %	Flanges. ½"/2" %	2½"/6" %
Light weight	51½	—	47½	51	57½
Heavy weight	44	44	39½	41	49½
Galv. lightweight	30	—	30	30	30
Galv. heavyweight	20	20	20	20	20

Tubes and tubulars sizes ½"/⅜" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/10	1/7	5d.
3½ in.	2/1	1/10	5d.
4 in.	2/1	1/11	9d.
4½ in.	2/2	2/3	10d.
5 in.	2/7	2/6	1/-

O.G. GUTTERS.

3 in.	2/4	2/2	6d.
3½ in.	2/8	2/2	9d.
4 in.	2/8	2/3	10d.
4½ in.	2/10	2/7	1/-
5 in.	3/5	3/-	1/1

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Angles.	Branches.
2 in.	2/10	1/11	2/11
2½ in.	2/11	2/3	3/5
3 in.	3/8	2/10	4/2
3½ in.	4/4	3/4	4/10
4 in.	4/11	4/-	5/10

NETT PRICES.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	4/4	3/5	4/2
2½ in.	4/9	3/9	5/2
3 in.	5/3	4/1	6/3
3½ in.	5/5	5/-	7/2
4 in.	6/-	5/8	8/5

L.C.C. COATED DRAIN PIPE.

cwt. qr. lbs. in 9 fts.	per yard.	Bends.	Branches.
4 in. 1 1 17	8/11	8/5	14/10
6 in. 2 0 1	13/3	17/6	30/4

Gaskin, 80/- per cwt.

	Per ton basis in London. £	s.	d.
IRON.—Staffordshire Crown, Merchant quality	20	15	0
IRON.—Staffordshire Marked Bars	21	10	0
Mild Steel Bars	19	15	0
Mild Steel Hoops	21	10	0

Ex Merchant's Stock, per ton (two-ton lots).

Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24	17	6
24 gauge	25	2	6
26 gauge	25	17	6
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—			
20 gauge	27	0	0
24 gauge	27	10	0
26 gauge	28	15	0
Galvanised Flat Sheets, C.R. and C.A.—			
20 gauge	28	10	0
24 gauge	29	0	0
26 gauge	30	5	0

	Per ton. £	s.	d.
Cut Nails, 3 in. and up	28	10	0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 2s. 4d. to 2s. 7d. per foot super.

PAINTS, &c.

		£	s.	d.
Raw Linseed Oil (5 galls.)	per gallon	0	7	8
Boiled Linseed Oil (5 galls.)	„	0	8	0
Genuine White Lead (free kegs)	cwt.	3	9	9
Genuine White Lead Paint (tins free)	gall.	1	10	3
Genuine Red Lead	cwt.	2	14	0
Linseed Oil Putty (free packages)	cwt.	1	8	3
Utility Putty (free packages)	„	1	4	9
Size, XD quality	ftn.	0	4	9

Turpentine substitute can be obtained and prices vary according to quality from 3/8 gallon upwards.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from November 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A1	A2	A3	B	B1
Craftsmen	2/2	2/1½	2/1	2/0½	2/-	1/11½
Labourers	1/8½	1/8½	1/7½	1/7½	1/7	1/6½

Aberdeen	A	Dumfriesshire	A2	Inverness	*	Perthshire	A2
Ayrshire	A	Dundee	A	Inverurie	A1	Peterhead	A1
Banff	B	Dunoon	A	Kincardineshire	A2	Renfrewshire	A
Berwickshire	A2	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothain	A	Lanarkshire	A	Roxburghshire	A2
Broughty Ferry	A	Edinburgh	A	Midlothain	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A2
Doune	A	Forfarshire	A2	Moray and Nairn	B	Stewartry	A2
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peebleshire	A2	Stornoway	A2
Dumfries	A1	Hamilton	A	Perth	A	Tayport	A
						West Lothain	A

* This town has its own rates: Masons, 1/11; Carpenters, 1/11; Slaters, 1/11; Plumbers, 1/11½; Plasterers, 2/- but 2/0½ is paid owing to the scarcity at present; Painters, 1/11; and Labourers, 1/6½.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 442

VARNISHES, &c.

		Per gallon. £	s.	d.
Oak Varnish	Outside	0	16	0
Fine do.	„	0	18	0
Fine Copal	„	1	0	0
Pale Copal	„	1	2	0
Pale Copal Carriage	„	1	6	0
Best do. do.	„	1	14	0
Floor Varnish	Inside	1	0	0
Fine Pale Paper	„	1	0	0
Fine Copal Cabinet	„	1	4	0
Fine Copal Flatting	„	1	2	0
Hard Drying Oak	„	1	0	0
Fine Hard Drying Oak	„	1	1	6
Fine Copal Varnish	„	1	2	6
Pale do.	„	1	14	0
Best do.	„	1	4	6
Best Japan Gold Size	„	1	14	6
Best Black Japan		0	12	0
Oak and Mahogany Stain (water)		0	14	0
Brunswick Black		0	9	6
Berlin Black		0	16	0
Knotting (patent)		0	17	0
French and Brush Polish		0	14	0
Liquid Dryers in Terebene		0	11	0

LEAD, &c.

(Delivered in London.)	Per ton. £	s.	d.
LEAD.—Sheet, English, 4 lb. and up	38	0	0
Pipe in coils	40	5	0
Soil pipe	44	5	0
Compo pipe	49	5	0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills ..... per ton } £18 0 0.

Patent Roof GLAZING

The Hall Mark AYGEE of Craftsmanship

Actual manufacturers of patent glazing. Lantern and Skylights, Metal Windows, etc.

AYGEE LTD.

Metal Window Manufacturers, Light Steel Constructional Engineers.

100 WESTMINSTER BRIDGE RD., S.E.1

Ring: Waterloo 6314

(6 lines)

THE SCOTTISH BUILDER

NEW BUILDINGS

GLASGOW.—Plans in hand for alterations and additions at 17 to 21, Tylefield-st., for J. & E. Transports, Ltd., for which the architect is Thomas S. Cordiner, 261, West George-st., Glasgow.

GLASGOW.—Plans in hand for staff accommodation, etc., at Walkenshaw-st., for David & John Anderson, Ltd., Bridgeton, for which the architects are Miller & Black, 132, West Regent-st., Glasgow.—Plans in hand for reconstruction and additions at Atlas Works, for Maver & Coulson, Ltd., Mile End, for which the architect is George Boswell, 256, West George-st., Glasgow.

SHOTTS.—Plans in hand for garage, for which the architect is Thomas Jesson, 16, Bon Accord-cres., Shotts.

Plumbing for Low-cost Housing.

The Technical Information Bureau of Lead Industries Development Council issue from 34, Ebury-st., S.W.1, a report on the use of lead and lead alloy pipe for Plumbing for Low-cost Housing.

GLASS.

SHEET GLASS, ORDINARY GLAZING QUALITY CUT SIZES.

	Per ft. super. d.
18 oz.	3½
24 oz. Clear or "R" quality	5
26 oz.	6½
32 oz.	8½

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.

	Per ft.
Rolled plate, ¼ in.	6½d.
Rough cast double rolled, ¼ in.	7½d.
Rough cast double rolled, ⅜ in.	7½d.
Figured rolled, and Cathedral, white	6½d.
Figured rolled and Cathedral, tinted	9½d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	10½d.

Rolled plate is the same price as rough cast double rolled.

	Per ft. s.	d.
Wire Rolled, ¼ in. thick	0	9½
Wire Bast, ¼ in. thick	0	9½
Georgian Wired Cast	0	10
"Calorex" Sheet, 21 oz.	2	6
„ „ 32 oz.	4	0
„ Cast, ¼ in. thick	0	9½
„ „ ⅜ in. thick	1	0
„ „ ½ in. thick	1	2
Non Actinic Glass, ¼ in. thick	0	9½
„ „ „ ⅜ in. thick	1	0
„ „ „ ½ in. thick	1	2

"VITA" GLASS.

	Per ft. s.	d.
"Vita" Plate Glass, about ⅜ in. thick—		
To 7 ft. super	5	0
Over 7 ft. super	7	6
"Vita" Sheet Glass, about 18/20 oz.	2	0
Cathedral "Vita" Glass:		
¼ in. thickness	2	0
⅜ in. „	3	0
½ in. Georgian Wired "Vita" Glass	3	6

GLASS BRICKS.

	s.	d.	
P.B. 1—8 in. × 4½ in. × 3½ in.	2	9	each net
P.B. 2—5½ in. × 5½ in. × 3½ in.	2	6	„
P.B. 3—7½ in. × 7½ in. × 3½ in.	3	6	„
P.B. 32—7½ in. × 7½ in. × 3½ in.	3	6	„

Radiused Corner Brick to match up with—

P.B. 2	4	6	each net
P.B. 3	6	0	„
P.B. 32	6	0	„

EMPLOYMENT—CONTROL OF ENGAGEMENT

By the Control Engagement Order, 1945, dated May 22, the then Minister of Labour, Mr. Bevin, revokes certain Orders controlling the engagement of workers, including the Undertakings (Restriction on Engagement) Order, 1941, which has affected operatives and certain classes of executives in the building and civil engineering industries. By a proviso, however, the situation is left very much as before by the new Order insofar as workers already in employment are concerned, but it enlarges the area of freedom for workers and employers in the acceptance or offering of new employment, and also makes provision for progressive relaxation by periodic lowering of the upper age limit (at present 50 years for men and 40 for women) of persons within the Order. Copies of the Order (S.R. and O., 1945, No. 579) which comes into force on June 4, are obtainable from the Stationery Office, Kingsway, price 2d.

FUTURE CONSTRUCTION

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

JUNE 8.

†**Horsham R.D.C.**—Completion of block of 4 houses at Dragon's Green, Shipley. F. Fraser Haddock, C., Council Offices. Dep. £2 2s.

JUNE 9.

*†**Bedford T.C.**—(a) Erection of 10 brick houses; (b) Road works. C. H. Blakeway, B.E. and S.

Birkenhead T.C.—Conversion of premises at Whetstone-la. into self-contained flats. B.E. and S.

Sheffield T.C.—Rebuilding 19 non-parlour type houses at Greenhill, Wybourn and Manor estates. W. G. Davies, City A. Dep. £2.

Sheffield T.C.—Conversion and adaptation of properties into flats. W. G. Davies, City A. Dep. £2.

JUNE 11.

Stockport T.C.—Alterations and repairs to baths and repairs to existing buildings at St. Petersgate Baths. W. F. Gardner, B.S.

JUNE 16 (Extended Date).

Huntingdon R.D.C.—Erection of 2 pairs of permanent houses at **King's Ripton. H. B.** Parkinson, **Montague House, Huntingdon.** Dep. £2 2s.

JUNE 16.

Huntingdon R.D.C.—Erection of 13 pairs of permanent houses. H. B. Parkinson, Montague House, Huntingdon. Dep. £2 2s.

*Salop C.C.—Erection of prefabricated hut for dining hall and scullery at Albrighton C.E. School. A. G. Chant (F.), County A., 5, Belmont, Shrewsbury.

JUNE 18.

*Litherland U.D.C.—Erection of 4 houses at Bradley-rd. S. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, HEATING, ETC.

JUNE 9.

West Riding C.C.—Internal renovations at Dinnington Chelmsford Mining and Technical Institute. G. E. Nicholson, Ed. Office, Orchard-chbrs., Church-st., Sheffield 1.

JUNE 11.

†**Durham E.C.**—Internal painting and decoration at various schools. F. Willey (F.), 34, Old Elvet, Durham. Tenders by July 4.

Leeds T.C.—Exterior and interior painting at Killingbeck Infectious Diseases Hospital. Superintendent of Works and Buildings, 126, Beckett-st., Leeds, 9.

JUNE 12.

Newbury R.D.C.—External painting of 54 houses. E. G. Hampshire, S., Phœnix House.

JUNE 16.

Prestwich T.C.—External painting of 363 houses at Polefield estate. B.E. and S. Dep. £2 2s.

JUNE 18.

Frome R.D.C.—External painting of 56 houses. H. L. Burt, Sanitary S.

JUNE 21.

Warrington T.C.—Painting and decorating at various schools. B.S.

ROADS, SEWERAGE AND WATER WORKS

JUNE 6.

Cardiff T.C.—Construction of roads and sewers at Fairwater. City E. Dep. £2 2s.

Croydon C.B.—Construction of roads and sewers at The Lawns and Convent housing estates. B.E. Dep. £5.

Mansfield Woodhouse U.D.C.—Construction of roads and sewers. L. Walker, M.Inst.M.&Cy.E., S., Manor House. Dep. £2 2s.

Sutton Coldfield T.C.—Construction of roads and sewers on various sites. B.S. Dep. £1 1s.

JUNE 7.

Weston-super-Mare T.C. — Construction of roads and sewers. B.E. and S. Dep. £2 2s.

JUNE 8.

Abergavenny T.C.—Construction of roads and sewers. B.E. and S. Dep. £2.

JUNE 9.

Louth T.C.—Construction of roads and sewers. B.S. and Water E. Dep. £2 2s.

JUNE 11.

Adlington U.D.C.—Construction of roads and sewers on two small estates. Bradshaw Gass and Hope, 19, Silverwell-st., Bolton. Dep. £1.

Faversham T.C.—Construction of roads and sewers. B.E. Dep. £2 2s.

Gosport T.C.—Construction of roads and sewers. B.E. and S. Dep. £3 3s.

Grimsby T.C.—Construction of roads and sewers. B.E. and S. Dep. £5.

Milford Haven U.D.C.—Construction of roads and sewers. E. and S. Dep. £5.

JUNE 15.

Billingham U.D.C.—Construction of roads and sewers. E. and S. Dep. £2 2s.

JUNE 16.

Ely U.D.C.—(a) Surface dressing; (b) Construction of roads. E. and S.

Haverfordwest T.C.—Construction of roads and sewers. B.S. Dep. £3 3s.

Lossiemouth and Branderburgh T.C.—Construction of roads and sewers. B.S., 32, High-st. Dep. £2 2s.

Stevenage U.D.C.—Construction of roads and sewers. E. and S. Dep. £2

JUNE 18.

Alnwick U.D.C.—Construction of roads and sewers at Wash Burn site. S. Dep. £2 2s.

Bury St. Edmunds T.C.—Construction of roads and sewers. B.E. and S. Dep. £2 2s.

Henley-on-Thames T.C.—Construction of roads and sewers. B.S. and E. Dep. £2 2s.

Ledbury U.D.C.—Construction of roads and sewers. S. Dep. £2 2s.

JUNE 20.

Cheltenham R.D.C.—Construction of roads and sewers. Rainger and Rogers (FF.), 29, Rodney-rd., Cheltenham. Dep. £2 2s.

JUNE 25.

Reading C.B.—Construction of roads and sewers at Whitley. B.S. Dep. £2 2s.

JUNE 30.

Tynemouth C.B.—Construction of roads and sewers. B.S., 19/20, Howard-st., North Shields. Dep. £2 2s.

FEDERATED EMPLOYERS'
ESTABLISHED 1904
INSURANCE ASSOCIATION

The Leading Office for

Contract Guarantee Bonds

ALSO

FIRE

WORKMEN'S COMPENSATION

PUBLIC LIABILITY

MOTOR

ETC. ETC.

Head Office:

8 KING STREET, MANCHESTER, 2

London Office:

23, Lawrence Lane, Cheapside, London, E.C.2

NO DATE.

Bredbury and Romiley U.D.C.—Construction of roads and sewers. E. and S. Dep. £2 2s.

PUBLIC APPOINTMENTS

Full details of Public Appointments marked * are advertised elsewhere in this issue. Those marked † have been advertised in previous issues.

JUNE 9.

*Swindon T.C.—Temporary Assistant Inspector of School Buildings.

JUNE 11.

*Wandsworth B.C.—Chief Housing (Estates Management) Assistant.

JUNE 12.

*East Suffolk C.C. — Four Architectural Assistants.

JUNE 15.

*Exeter T.C.—Senior Assistant Architect.

AMENDED DATE, JUNE 16.

*Taunton T.C.—Senior Architectural Assistant.

JUNE 23.

*Brighton Technical College.—(a) Lecturer in Building Subjects; (b) Teacher of Carpentry and Joinery; (c) Teacher of Plumbing.

*East Riding C.C. — (a) Engineering Assistant; (b) Quantity Surveyor; (c) Quantity Surveyor's Assistant.

*West Riding E.C.—(a) Two Assistant County Education Architects; (b) Two Senior Assistant Architects.

JUNE 25.

*Huddersfield Technical College.—Lecturer in Department of Building.

JUNE 30.

*Montgomery C.C.—Architectural Assistant (male or female).

†Northants C.C.—Planning Assistant.

GENERAL BUILDING WORK

Bedworth.—U.D.C. appointed S. J. Oldham, The Hollies, Job's-la., Coventry, as architect for 40 houses at Poplars Farm estate.

Birkenhead.—T.C. propose Children's Hospital at Wexford-rd.

Bridgnorth.—C. B. Parkes (L.), architect, The Estate Office, Bournville, Birmingham 30, preparing plans for erection of houses, for T.C.

Chesterfield.—Derbyshire C.C. propose additions at Walton Tuberculosis Sanatorium at £12,500.—Church Council of the Chesterfield and Staveley Deaneries propose churches at Holmewood and Staveley.

Daventry.—T.C. propose: Housing site at Ashley-rd., and Public Hall. Hopcraft & Norris, Ltd., Brewers, Oxford-st., propose erection of assembly hall.

Leeds.—Housing Committee received permission of M.H. to invite tenders for 226 houses to be erected at Seacroft, Scott Hall-rd. and Belle Isle estates. Plans by R. A. H. Livett (A.), Housing Director, Priestley House, Quarry Hill, Leeds 9.

Manchester.—D. Rosenfield, Ltd., Cheetham Hill-rd., propose erection of motor showrooms at Cheetham Hill-rd. Plans by G. G. Baines (F.), 12-24, Guildhall-st., Preston.

Menai Bridge (Anglesey).—U.D.C. appointed R. T. Jones, Midland Bank-chbrs., Bangor, as architect for preparation of plans for houses.

Newcastle-on-Tyne.—Extensions to be made to premises of E. Baker & Co., Ltd., Blenheim-st. Plans by Hetherington & Wilson, County-chbrs., Newcastle.—Plans by C. S. Errington, Grainger-st., Newcastle, for hotel at Fowden-la., for A. Arrol & Sons, Ltd., Newcastle, have been approved.

Rochdale.—E.C. propose extensions at Technical school.

Stretford.—Lancashire E.C. propose additional accommodation at the High school for Girls. Plans by A. T. Stephenson (F.), County A., County Offices, Fishergate-hill, Preston.

Towcester.—Sir John Brown (Brown & Henson), 83, St. Giles'-st., Northampton, is architect for housing schemes for R.D.C.

Wakefield.—Board of Management of Wakefield Hospital and Wakefield General Dispensary, Northgate, propose children's ward.

Wigton.—North-Eastern Housing Association to obtain tenders during the next few months for erection of 112 houses on behalf of R.D.C.

Wrexham.—N.F.S. propose fire station at Mold-rd.

BRITISH RESTAURANTS AND CANTEENS

Accrington.—T.C. approved conversion of buildings at Dutton-st., into canteen for Transport Department.

Bolton.—E.C. propose alterations at additional schools for provision of dining accommodation.

Coventry.—T.C. propose two additional municipal restaurants on selected sites.

March.—Isle of Ely C.C. propose dining-hall and kitchen at Hereward school.

North Riding.—E.C. proposes school canteens at Hudswell, Dany Fryup, Ellerby and Sutton (Thirsk).

TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government departments.*

Easington.—Erection of 100 temporary houses: *Boots, Ltd.

Hebburn-on-Tyne.—Additions to works for Pyrotenax Co., Ltd.: *Demolition and Construction Co., Ltd., London.

¶London (Air Ministry).—List of new contracts to value of £500 or over for week ended May 26:—

General maintenance work: A. M. Griffiths & Son, Ltd., Wolverhampton; Johnson & Bailey, Ltd., Cambridge; Williams Bros., Pontadawe, Swansea; F. W. Chandler, St. Annes, Lancs.

Erection of structural steelwork: Fleming Bros., Ltd., Glasgow.

Miscellaneous structural steelwork: G. M. Carter (Erectors), Ltd., Newcastle-on-Tyne; Redpath, Brown & Co., Ltd., Glasgow, C.2.

Surface dressing work: Clifford Lewis, Leamington Spa, Warwickshire.

Tree felling work: Land Clearance (Sutton Coldfield), Ltd., Sutton Coldfield, Warwickshire.

¶London (War Dept.).—Works contract placed by War Dept. for week ended May 19:—

Perthshire: Miscellaneous work, James McIntosh, Jnr., Windygates, Fife; A. B. Kennedy & Son, Pitlochry, Perthshire; Laird Bros., Forfar, Angus.

Cumberland: Roadwork and drainage work, Yarwoods (Altrincham), Ltd., Altrincham, Ches.

Lancs: Miscellaneous work, Edwin Marshall & Sons, Ltd., Ashton-under-Lyne, Lancs.

Glouc: Heating work, G. H. Haden & Sons, Ltd., Birmingham 3.

Surrey: Miscellaneous work, Leatherhead Building Co., Ltd., Leatherhead, Surrey.

Hampshire: Miscellaneous work, Johnson & Sons (Liphook), Ltd., Liphook, Hants.

Rochdale.—Works, for T.C. S. H. Morgan, B.S.: Additions at Brimrod Junior school and additions at Norden-st. canteen for school meals: *R. Blincoe, Whitehall-st., Rochdale; construction of site works, roads, surface water and foul sewers at Section "A" Kirk Holt estate: *J. Gerrard & Sons, Ltd., Pendlebury-rd., Swinton, Manchester, £50,400.

Stockton-on-Tees.—Erection of six houses at Oxbridge-la. estate, for T.C.: *George Hope, Stockton-on-Tees.

West Bromwich.—Erection of 4 houses at Walsall-rd., for C.B. J. G. Jefferson, M.Inst.C.E., B.B. & S.: *Molyneux Bros., Bath-st., Walsall.

Wolverhampton.—Rebuilding of five municipal houses at St. Giles's-cres., for T.C. W. M. Law, B.E.: *P. Blundell & Sons, Ltd., 183, Windsor-av., Penn, Wolverhampton, £3,896.

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